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IMPROVED STEAM BOILERS.

Compared with the many appliances useful to the miner and mill-man, probably none is more important, and should be studied with more care, than that by which the power that drives machinery is generated. We therefore shall give in the JOURNAL OF MINING, from time to time, illustrations of such steam boilers as combine new features. That which we illustrate this week was recently patented by Robert W. and Daniel Davis, of Long Island City, N. Y. Its principal feature is the arrangement for drying or superheating the steam, which is also useful in metallurgical operations. This boiler is thus described: Fig. 1 represents a vertical section of the boiler, and Figs. 2 and 3 the superheating apparatus, which consists of a series of spheres, G, disposed so as to form a circle above the body of the boiler, and so connected by the pipes, H, as to circulate or pass the steam successively through each sphere. The boiler (Fig. 1) consists of a peculiar arrangement of fire-tubes and combustion chambers in a vertical shell, operating so as to throw heat outward, whereby the greatest heat is brought to bear against the largest body of water, to prevent foaming. B, B, are steam generating spaces of the boiler, arranged over and around the fire-box. C, C, are smoke and draught tubes and heating chambers, connecting the fire-chamber, A, with the smoke-box, D. These are arranged in concentric circles over the fire-box, the outer ones, C, being in more thorough communication with the smoke-box than the inner ones, where the draught is naturally quickest and more largely distributed through them, causing the heat to be thrown against the body of the water. The central tubes may be wholly or only partly closed, to prevent a central or direct escape of heat, by being covered by a cap at *d*, through which the heat passes from the contracted apertures, *c*. The inner row of the series of smoke-tubes, C, have also their outlets more or less contracted, and the draught checked by a steam dome, E, arranged within the smoke-box and over the series of smoke-tubes, the draught finally passing off by the tube, *d*, which goes through the dome. This dome is closed, and only gets its supply of steam from the boiler by the pipes, *c*. Acted on by the escaping heated gases, this dome becomes a steam-drying chamber from whence the supply is taken by a pipe, *g*, (Figs. 2 and 3,) to the superheating chambers. These chambers consist of a series of spheres, G, arranged so as to form a circle outside the dome and within the smoke-box, directly over the outer row of smoke-tubes, C. Through these tubes the draught is strongest, and greatly contributes to the superheating of the steam in the spheres. The steam supplied by the pipe, G, is first passed to one of the spheres, and from thence, by connecting pipes, *h*, to the other spheres in succession, till it arrives at last in the circle, from whence in a superheated state it may be taken by the pipe, *k*, to the engine. This boiler is fitted with Messrs. Davis' patent grate, and the whole is manufactured by the Duplex Steam Boiler Company, Hunter's Point, L. I. Messrs. Willard & Millward are sole agents, 284 Water street, New York.

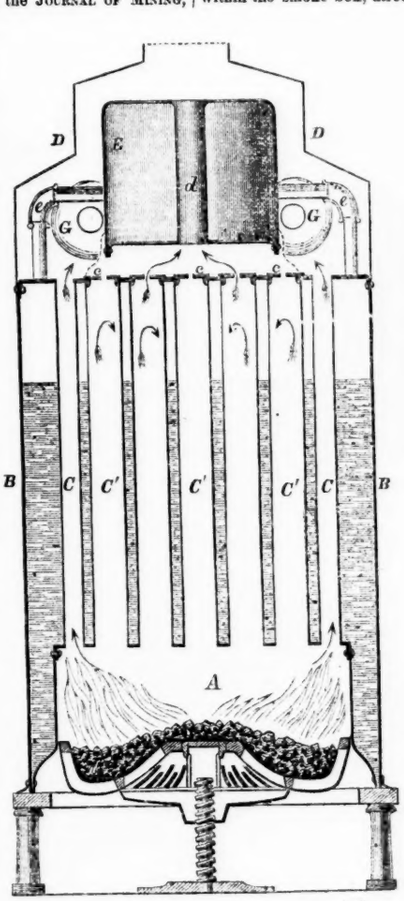


Fig. 2

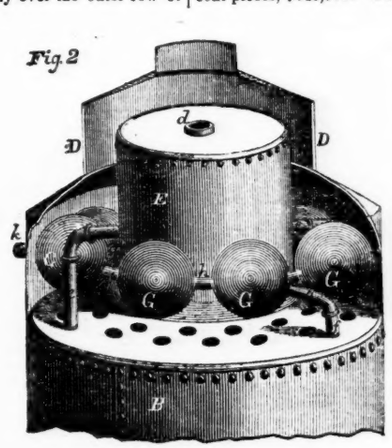
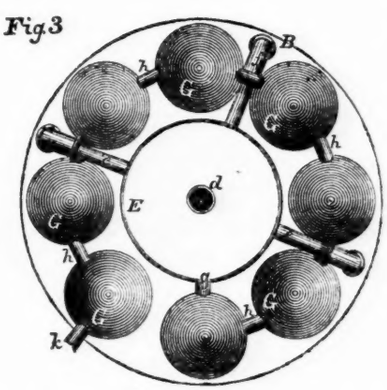


Fig. 3



IMPROVED STEAM BOILERS.

Annual American Mint Coinage.

Secretary McCulloch, in his last report, says: The total value of the bullion deposited at the Mint and branches during the fiscal year was $38,947,156 88, of which $37,223,640 17 was in gold and $1,723,516 71 in silver. Deducting the redeposits, the amount of actual deposits is $31,911,719 24. The coinage for the year was in gold coin, $28,313,944 90; gold bars, $9,115,485 46; silver coin, $680,264 50; silver bars, $916,382 08; cents coined, one, two, three and five-cent pieces, $646,570. Total coinage, $29,640,779 40. Total bars stamped, $10,031,867 50. The gold deposits, of domestic production, were, at Philadelphia, $2,815,616 34; San Francisco, $17,436,499 18; New York, $8,557,664; Denver, $160,982 94. The silver deposits were, at Philadelphia, $56,118 81; San Francisco, $623,682 21; New York, $213,481. The gold and silver deposits of foreign production were $2,047,674 76. The amount of gold coined at Philadelphia was $10,096,645; at San Francisco, $18,217,300; of silver, at Philadelphia, $399,314 50; at San Francisco $280,950; of bronze and nickel and coppers, at Philadelphia, $680,264 50.

Mining Machinery.

Nearly all the mining machinery used in California, says the Nevada *Gazette*, has either been invented here or greatly improved. The stamps are about the only exceptions. These were first brought into use in the mines of Freiburg, Saxony, about the beginning of the sixteenth century, and have been used for over three hundred and sixty years without any material improvement, and are not likely to ever be superseded. The pans, now so extensively used here, answer in place of the Mexican arasta and Chile mill; they work on the same principle, but have been so much improved by California ingenuity that they bear little resemblance to the rude appliances of the Spaniards, from which they were adopted. In the process of amalgamating, and the amount of gold and silver saved, the pans are in no way superior to the arastra; but the pans will do the work much more expeditiously, and with less expenditure of power, and we may look for still further improvements in the same line. There is still a wide field for invention, both in the mechanical and chemical processes of reducing ores and amalgamating precious metals. Placer mining has grown up and been brought to its present state of perfection in California—all the different and inge-

nious applhances used in sluicing and hydraulicking being the productions of California miners.

Mr. Richardson's Petroleum Furnace.

Mr. C. J. Richardson has issued a prospectus of his "liquid fuel portable grate for petroleum, shale, crude or heavy oil. residuum or grease, creosote, and gas-tar, without smoke." The grate is offered by the patentee to shale oil manufacturers and refiners for use in their retorts, to enable the refuse of the oil-stills to be used up as fuel instead of slack or coal. Mr. Richardson states that during the time he was conducting his experiments in Woolwich Dockyard he was repeatedly asked for such an apparatus. In applying his invention in this direction, the patentee has adopted the suggestions thrown out in a recent number of the *Oil Trade Review*, and it now remains to be discovered by a practical application whether he has done so successfully. We have, however, the assurance that any boiler having water space below the grate can be fitted with the petroleum trough without alteration, and in this arrangement we may hope to see the use of liquid fuid introduced in cases of great emergency, where the relative cost is not an object, as pointed out in the article referred to. Mr. Richardson gives a remarkable instance of the enormous cost of ordinary fuel for a long voyage. It appears the steamer Nemesis, of 2,018 tons and 600 horse-power, in her passage in the spring from Calcutta to Suez (her boilers not in very good condition), burnt 1,600 tons of coal; she must have used nearly the same on her return; at the price paid, £3 10s. per ton, £5,600 must have expended in fuel each way. Mr. Richardson adds that if her boilers could have burnt petroleum, with the Burmese at one end and Egyptian at the other, one-third weight of fuel only, would have been necessary, and a very large freight profit would have been secured, with little labor to the stoker, and with no clinkers in the furnace or priming in the boilers. It has been proposed by Captain Matthews, of Mold, to Mr. Richardson, to exhibit the boiler in operation at Woolwich for a few days, and this, subject to the approval of the Lords of the Admiralty, will be done. It will be kept in operation about a week, and the consumption of oil during that time will be considerable. Mr. Richardson proposes to levy contributions of oil from those manufacturers who desire to see the experiments.—*Engineer.*

Great Mining Enterprise in California.

Mr. Orlando Jennings, with other engineers, have, during the past summer, been surveying a ditch, purchasing mining ground and making other preparations for extensive hydraulic mining at Cherokee Flat, Butte county, California. The engineers are engaged for an Eastern company, and have secured several hundred acres of mining ground where the depth of gravel is from twenty to six hundred feet deep, and a great portion of the ground having a depth of thirty feet of blue gravel next the bed rock. Gold is found in every pan of dirt from the grass roots to the granite. These have been rich diggings since the earliest days of California mining, but the miners have only been able to wash during a few days of the rainy season. A ditch will now be brought to the Flat from the north fork of Feather River, crossing the west branch and the depression between the two ridges by an iron pipe two and a quarter miles long, with a diameter of thirty five inches, and strong enough to stand a pressure of six hundred feet. This will carry twelve hundred inches of water measured under a pressure of ten inches. It is asserted that this is the greatest mining enterprise ever undertaken in California. The cost of making the ditch, the pipe, and placing it, and the opening of the claims will exceed half a million of dollars. The ditch and pipe will together be about twenty-six miles in length.—*Exchange.*

Toil and Song.

I launched two little barks
At dawn one summer's day;
I filled with freight these little arks,
And sped them on their way.

Not even seemed my boats in strength,
Nor built by equal hands;
They courses took of different length,
But to the same far land.

The one was built of stoutest oak,
Made to withstand the shock,
When 'gainst her side the wild wave broke,
Or when she struck the rock.

No beauty was there in her form—
Nought that the waves would spoil;
I launched her boldly in the storm,
And on her prow was "Toil"

The other I built of a pearly shell,
Her sails were of foil of gold,
Her gleaming prow cut the waters well,
It was cast in a fancy mould.

A gossamer thread was the cable I gave,
And it held her fast and strong;
I launched her out on a sunny wave,
And I wrote on her banner "Song."

And now I stand on the shore and wait,
Watching the gleam of each sail;
Waiting to hear of each tiny bark's fate—
Which shall succeed, which shall fail.

Mining Summary.

Nevada.

The Comstock.—The S. F. *Mercantile Gazette* of Nov. 9th says: The mining share market acquired a degree of firmness since our last issue, little looked for some time ago, and almost without exception shares were sold at a considerable advance. This appreciation, however, occurs to a more or less extent as the monthly period for the declaration of dividends approaches; still there is a more potent cause than this in explanation of the present rise. It is found that the lower levels on the Comstock lode have not yet become exhausted, and that recently some very satisfactory developments have been made at greater depths than hitherto attained. In this connection we might mention that late discoveries in the Savage mine fully substantiate the existence of valuable deposits of ore at points not yet reached by the deepest shafts. .....Hale & Norcross still remains out of the market —continuing in firm hands. We quote it at $1,750 bid. In sinking from the 700 to the 780-foot level a good body of ore, it is said, has been encountered at a point 27 feet below the 700-foot level. The receipts of this company for the month of October, are $149,931 63, being 65 per cent. of the assay value allowed by the mill. This gives an average yield of $58 per ton. Savage has materially improved since our last reference, opening at $1,250, buyer 30, gradually advancing to $1,450, seller 2, then selling at a still further advance at $1,475, buyer 3, and closing at $1,455, seller 30. During the week ending Oct. 27th, 1,617 tons of ore were extracted, 1,302 tons carried to the mills, and 690 tons left on hand at the mine. The assay value of bullion from the number of tons mined as above is given at $76,545, which is an average of more than $47 per ton. We have interesting information in regard to the developments of this mine since our last issue. In the sixth station, winze No. 9, has been prosecuted to a depth of 28 feet, and it is said that ore averaging $70 per ton has been found. On the upper station, south mine, the ore seam has widened to some 30 feet, and in the lower station is about 18 feet in width, showing ore of good average quality. On the seventh station, from the old shaft, the main body of ore has been reached, which also exhibits fine ore, and between this point and the sixth level it is said 100 feet of ore have been developed. At the 2d station, Curtis shaft 300 feet distance from the point at which the main body of ore was reached in the 7th level, the southeastern end of the same deposit, was cut during the past week. The developments, at a depth of 666 feet below the croppings, present a very favorable future for this company. It is estimated that the recent discoveries alone will supply their present reduction capacity for two years. They now employ seven mills which reduce about 200 tons of ore per day. The bullion receipts during the month of October, amounted to $210,000 .....Crown Point advanced from previously quoted figures, selling at $1,010, improving to $1,085, but at the close dropping to $875. The inclines continue in good ore and the drift from the 400-foot station, it is thought, will soon reach the lode. During the week ending the 27th ult., 736 tons of ore were taken from the mine ... Yellow Jacket sold at $630@639, advanced to $725, receded to $686, and closed yesterday at $850, seller 30. During the month of October, $180,288 in bullion were received, giving an average yield of $26 97 per ton. .....Gould & Curry improved from $430 to $460, then advanced to $550, and at the close we quote it at $525 asked. We learn that few feet were sold at higher figures on the street. The prospects of this company, it is said, are more encouraging at this period than for some time past. The October yield of bullion amounted to $114,321 .....Imperial steadily rose from $85, buyer 30, to $106, closing yesterday at $109, buyer 30. The Imperial and Empire shaft is now down 625 feet, and is well timbered for a distance of 648 feet. This shaft was commenced some 10 months ago, and has now been completed in all respects to a depth of 600 feet, but from this point downwards only three compartments will be constructed at present. This shaft, when completed, will afford hoisting facilities for all the Gold Hill mines. It is to be continued, we learn, to a depth of 1,200 feet, and to work at that point, a sufficient power of machinery is now being supplied. The bullion receipts of this company for the month of October, aggregate to $98,380 ..... Empire Mill Mining Company sold at $97 50, advanced to $120, and closed yesterday at $112. With the exception of a brief stoppage for repairs to machinery, everything is progressing well at the mines of this company. A dividend of $6 per share was declared on the 7th inst., payable on the 9th.....Chollar-Potosi opened at $100, advanced to $126 50, then sold at 110@107 50, and closed yesterday at $113. During the week ending October 28th, 631 tons of ore were forwarded to custom mills. The sinking of the new shaft is still progressing, but, it is said, nothing encouraging has been reached at the above date. The company now employs 95 men..... Ophir sold at $82, buyer 10, improved to 92 50, receded to $60, and sold yesterday at $79. We learn of nothing encouraging from this mine at latest dates.... Confidence was dealt in at $52@58, declined to $51, advanced to $58, and at the close we quote it at $66 bid. The annual meeting of this company will be held to-day at their office, No. 445 Montgomery street. .....Belcher advanced from $55 to 67 59, buyer 30 per share. Sierra Nevada sold at $1 25, assessment of $2 50, delinquent. Overman changed hands within a range of $8@23, closing yesterday at $15 50. Nearly 3,000 shares were sold in the Board since our last issue. Bullion opened at $14, then sold at $12 50.

Humboldt.—The *Register*, Oct. 27th, says: The Trinity and Sacramento company have secured the entire Montesuma claim. The purchases this week covered 820 feet, at $50 the foot, coin. Almost the entire amount has been paid. The erection of smelting works was not waited entirely for the consummation of these purchases; but work has gone on more briskly since the trades were made definite, and now the fires will not be allowed again to die till at least the ore already out of the mine—400 tons—has been smelted. From the face of drifts and shafts now into the ledge, the ore can be taken out fast enough, with the start now on hand, to keep the furnaces employed through the winter. The mine is well opened, for the comparatively slight depth attained, and the ledge shows most promisingly. The Etna mill belonging to this company has been removed down to Oceana, and will furnish, together with the Trinity mill, all the crushing force necessary for preparing ore for the furnaces. The building for the furnaces is 60 by 78 feet, and will accommodate 5 furnaces - 3 for smelting. 1 for calcining, 1 for refining. When the full force of furnaces is under blast, they will turn out, it is calculated, 30 tons of metal every twenty-four hours. The proportion of bullion which this metal will yield is not now known. During the past two weeks two of the larger and a Mexican furnace have been running. None of the metal from them has yet been refined. Will be reduced to bullion next week. The metal contains a large proportion of antimony. The company has been informed from San Francisco that there is no market for antimony in large quantity, so preparation is made for setting it free by evaporation. The lead will be separated from the silver, and, we presume, be saved for transportation, some time, to San Francisco. We look for good returns from these works—expecting to report regular shipments, soon, of large amounts of bullion.

Reveille.—A miner of experience having visited this district to ascertain the truth or falsehood of the *Reveille's* statements concerning it, writes to that paper: I must admit that the ledges, if not quite so wide as some enthusiastic parties represented them, are yet, in my judgment, the largest and richest which have been discovered in this State, unless, indeed, the mines of Pahranagat, which I have not seen, stretch ahead of them. The Reveille district is about one hundred and forty miles southeast of Austin, and is now, by means of Stonebarger's toll road to Hot Creek, rendered perfectly accessible in almost any weather. The formation appears to be a telspathic granite, capped by a sedimentary limestone, similar to that of Hot Creek and Danville districts. The ledges are numerous, and some of them are well defined even without work being done, while others are so covered by the calcareous cap as to show nothing more than bunches of good mineral on the surface. The ore is of a very high grade, assaying from $500 to $5,000 per ton. Some of the localities show horn silver in thick dull flakes and layers; other give beautiful specimens of native silver; while the prevailing character of the ore in the district is a black partially desulphurized sulphuret, well diffused through the gangue of the vein The chloride ores, when put into the forge, actually bubble and boil in silver globules, as a piece of bacon does in its own grease, and buttons of pure silver, as large as good sized shot, are as common as peas in the miner's cabin. Where so many valuable ledges exist in a district, it is almost invidious to particularize them; but the Crescent, Indian Queen, August, National, Highbridge, Antarctic, Mediterranean, Fisherman and Santa Fé, are deserving of special notice. They are truly fine mines, and will certainly command large prices when even partially developed. Running water is scarce in the district, but springs seem to be numerous, and will yield water enough for milling purposes. Wood is plentiful twelve miles off, and if water is prospected for half way between the mines and timber, there is every probability of abundance being obtained

Twin River.—The Murphy mine, at Twin river, is yielding ore fully up to the expectations of the most sanguine. We are informed that seventy-one tons were reduced at the mill, with the average yield of $185 55 per ton, producing the handsome sum of $13,174 05.—*Reveille.*

Hot Creek.—We learn that the Consolidated Silver Mining company are erecting a ten-stamp mill, with a thirty horse power engine, at Hot Creek, where they own important mines. The machinery passed through town yesterday on the route from Sacramento City to the district.—*Ib.*

Colorado.

The Central City *Register*, of Nov. 20th, says: The shipments of gold have constantly increased since the 1st of July. The shipments of July being $11,670 more than the shipments of June. The August shipments exceeded those of July by $15,502. September shipments showed an increase of $37,357 over August,

While the increase of October is $3,574, exclusive of Smith & Parmelee, whose October yield was not shipped until November. Including this, the increase in October will not fall far short of $30,000..... At Clark & Co.'s bank is a 25 lb. button of silver, worth, in coin, $450, or $675 in currency. It was run from 1,400 pounds of metal, and is from the smelting works of Mr. J. W. Watson. As the first yield of silver from the Georgetown ores by the smelting process, it must be regarded as a triumphant success..... Among the many newly discovered lodes which bid fair to prove valuable in future is the Sadowa, situated near the Becker mill in Chase Gulch, and owned by Messrs. Roach & Skinner. They have a shaft down sixty feet and a crevice, which we measured, upwards of three feet wide at the bottom. The walls are remarkably well defined for the last thirty feet, both walls being solid and regular. About sixteen inches of the width of the crevice is filled with galena, zinc blend, sulphides of iron and copper, and sulphate of baryta, comple ely combined and intermingled, probably one-half the weight being galena. The remaining portion of the crevice matter is specked through and through with particles of iron, and may, at a greater depth, give place to paying ores..... The Black Hawk *Mining Journal*, of same date, in the course of a long and interesting article on the Baker lode (Kelso mountain, 30 miles from Central city), says of Mr. Watson's tests of the ore: Of the Baker mineral, best streak selected, but undressed and unroasted, there was a ton smelted, which produced 600 lbs. of lead. From the John Brown, a lode Mr. Watson has just bargained for, situate some three miles above the forks toward Quail creek, about two tons, also not dressed nor roasted, was smelted, producing 800 lbs. of lead. On cupelling the 1,400 lbs., which had to be done together, 25 lbs. Troy of pure silver was obtained—at $1 35 an oz., $405. It should be observed here that this is no fair criterion of the value of the ore, 1st, because, not having been dressed nor desulphurized, it was in no condition to smelt—there was thirty per cent. of rock in the Baker ore, and this and the sulphur together would hold a considerable proportion of the lead and consequently of the silver; 2d, because the bottom of a new smelting furnace has almost to be displaced with lead before it ceases to absorb. This furnace was absolutely new, and it not only absorbed the lead, but a good share of it dripped through the cracks into the ash pit. In a large new furnace they have to run four to six weeks before their bottom is well made and comparatively stops leaking and absorbing. All the circumstances attending this trial were unfavorable, and we do not believe the yield of about $135, silver, a ton of raw, undressed ore, half expresses the value of the ore, properly worked..... The Denver *News*, of Nov. 21st, states that the burning of the Ni-Wot mill, Ward mining district, is thrown back at least a year in its mineral development.....

The same paper says: The principal coal mines of this Territory, that are now opened, are situated in Boulder county. Among these the Kitchen bank is the most celebrated, although doubtless others will be found yielding as good a quality of mineral, when worked as extensively as the bank named. The Kitchen bank is now opened for a distance of about one hundred and sixty feet, and shows a vein twelve feet in thickness. The vein has increased gradually from eighteen inches on first opening, to its present very respectable proportions. The coal, when first taken from the mine, has a glossy, black appearance, burns well, leaving but a small residue of ashes, and seldom any cinders or "clinkers." The ashes are of a reddish white color, and an almost impalpable powder. Considerable resin is found scattered throughout the vein, showing conclusively that pine enters largely in its formation. The coal fields of Boulder county occupy a much greater breadth of land than was at first supposed, several new veins having been discovered the present season. The mines now worked are mostly situated near the Belle-Mont iron furnace and foundry. The late discoveries extend down the Boulder river ten or twelve miles below Boulder city. As far as present mining proves, the coal beds of Colorado are thrown at fault, some of them being almost perpendicular, while all have a dip varying from the true inclination of coal beds in undisturbed strata. About four miles below Valmont, in Boulder county, there is a vast bed of unstratified soft sandstone, cropping out on the river bank. This ledge lies horizontally, or very nearly so to all appearances, and immediately beneath it, we are told, there is coal. The quality and thickness of the vein has not been determined, but if coal really exists there, we may expect from the appearance of the overlying strata that it will be undisturbed. There is little doubt of the abundance and value of the coal in this Territory. Geological proofs of its existence are found far out on the plains, and a party is now engaged in sinking a shaft in search of it, with the most flattering prospects, at Fort Wicked on the Platte route, about a hundred and twenty miles east of Denver. Lieutenant Pierce, in his Government surveys, found what appeared to be a very good quality, existing in great abundance, and showing bold out-croppings, in his surveys, sixty miles south of Denver. Last year a party in the Middle Park discovered a very fine vein of pure Albertine coal, the best quality of this mineral in the world. The vein was traced for a distance of five miles, and showed an average thickness of four feet. On trial it was found to ignite very readily, burning with a clear and brilliant flame, and no perceivable smoke. The great bulk of iron ores yet discovered in the Territory like the coal, is found in Boulder county. The ore is of the variety known as *limonite*, and is found in patches or pockets, from which large masses are frequently taken. These pockets are very numerous. On assay the ore yields seventy-six per cent. It is easily smelted, being in combination with an excellent flux of manganese. The iron obtained is of the best quality, being soft and of that blue appearance on fracture that is deemed desirable by foundry men in making selections of metel for important castings. In all the cases where coal mines have been opened, fire-clay of excellent quality has been found lying contiguous, in veins varying from two to five feet in thickness. Iron has been found near Golden city. The deposit there is believed to be a continuous lode or vein. The ore has much the same appearance as that above described, and, if we remember right, yields the same percentage by assay. A fine wide vein of splendid iron was discovered not long since on the Cache-la-Poudre, near Fort Collins. This iron we have previously described. The ore yields sixty-five per cent. by assay, and an unlimited quantity of it can be obtained. Not much search for iron has yet been made, and the present discoveries have mostly been accidental. When the demand arises there is no doubt, from the geological appearance of the country along the base of the mountains, any needed amount of this valuable mineral will be found.

Montana.

From the Virginia *Post* of Nov. 10th we glean the following: It affords us intense satisfaction to announce the complete success of the first trial of the cupel furnace of Professor Augustus Steitz, who has recently erected his works in the Rattlesnake district. The ore has yielded eighty per cent. of lead, and upon the 4th inst., one ton was placed in the furnace and subjected to the heat for the space of six hours. The lead was expelled and fifty pounds of pure silver remained. But this important fact is overshadowed by another of a more satisfactory character. Any person might secure a brick from such rich ore, but few men could run so close to the assay, and wonderful as it may appear, the loss is between ¼ and ½ of one per cent. We congratulate the company that own these works upon their good fortune in possessing this claim upon the Legal Tender lode.....An energetic company propose to construct a bedrock flume in Alder gulch next season, and are already adopting the proper measures to secure this important object. Water will be brought from the Stinking-water without difficulty, and a head of 4,000 inches can be obtained. It will take seven years to wash all the gravel, and the prosperity of Virginia City will be greatly affected by its success.....Charles Hendrie, an extensive foundryman of Burlington, Iowa, intends to build in Helena a branch foundry and machine shop. He owns four quartz mills, which he constructed in his establishment, and designs to put into practical use at once. One will be located in the Summit district, another in New York Gulch, and the third will commence to crush the quartz upon the celebrated rich Union lode, owned by Whitlatch. The remaining mill is in Virginia City.....From a friend recently from Pipestone we have report of a rich gulch discovered there about a week ago, as well as a newly discovered quartz lode.....It may not be known to the people of Helena that we have within the city limits mining ground so rich that if it was situated a hundred miles or more from here, it would occasion a great stampede. In a little ravine running into Dry Gulch, and called by the miners "Bowery Gulch" there are several very fine claims, from one of which we saw a pan of dirt taken which yielded over twenty cents, and this, too, without any "salting." In several gulches hereabouts, the ground has been laid over until next spring, but those who have good claims are working them as vigorously as ever.....A letter from Jefferson City, Oct. 29th, says: The lodes in this vicinity are legion. First is the Gregory. There are two different parties working upon various portions of the lode. One of these parties, under the supervision of Dr. Russell, agent for an eastern mining company, have succeeded in striking the vein upon the company's claim—No. 3 N. E.—at a depth of 65 feet, by tunneling a distance of 120 feet, the workmanship of which cannot be surpassed in any of the mines, revealing a crevice of beautiful ore, which had not terminated at a width of six feet at last reports. This company, undoubtedly, will have a smelter in operation as early as possible the ensuing spring. The other party, under the direction of the discoverers, Messrs. Axers and Mimmaws, have been tracing the lode with success on discovery claim and No. 1 N. E. The principal shaft on discovery claim has a well defined crevice of four feet in width, which continues to widen as they go down. This lode is now so well developed that the most skeptically inclined cannot fail to be convinced of its reality. This ore has many times been tested by assayers, and always with fabulous results. It is silver-bearing quartz, and will, without doubt, prove a fortune to the owners. The same parties, encouraged by this success, have determined to unite and together work upon a lode in close proximity to the Gregory, and of the same nature—a new discovery, named in honor of the finder, the "Axe lode." Preparations are being rapidly made to thoroughly prove other lodes—the Indiana, Corris-Annie, Olive, and others, all being of a similar galenic nature and assaying highly.....Another correspondent writes: Since the discovery, last June, of rich copper ledges in the Muscleshell country, one hundred miles southwest of Kercheval City, it has been found necessary to open a channel of supply to those mines. The fortunate discoverers of this new source of wealth to Montana are McLaughlin and Dickerson. One immense ledge of this metal was found and traced by its out-croppings for fourteen thousand feet. Ever since the month of discovery improvements have been going on, and several tests and assays have been made of the rock. In summing up all the assays, we find an average of 65¼ per cent. of metal, composed of part silver, with slight traces of gold. A company has been organized by substantial men of Helena, and work is going on briskly, taking out ore, which it is the intention of the company to ship per steamer to the east, there to be worked. The country these copper mines are situated in is well timbered, and four mountain streams intersect the ledge.....In his recent message to the Territorial Legislature, Governor Green Clay Smith says: "Many have advised the establishment of a mint in this Territory. I do not see the propriety or necessity of such an office; but we do need, and I trust will be granted, an assay office, which will answer every purpose. To the accomplishment of this end, therefore, I trust you will so represent the case that the Government will not refuse your request." He recommends the address of a memorial to Congress in behalf of the Northern Pacific railroad, and says: "The Government feels kindly, I am sure, towards this national enterprise, and when it has seen the immense treasure which has been taken from our mountains and gulches, and that we send gold by the boat load to the east; that the silver and copper mines are enormous and almost fabulous in their richness; that our soil is rich—growing the finest wheat and barley, potatoes, cabbage, and other vegetables, with the richest and most nutritious grasses in the world. It will not hesitate to bring itself in immediate communication with us." Relative to Indian warfare, he says: "Application has been made to the Secretary of the Territory for arms to be used by prospecting and mining parties on the waters of the Yellowstone, and but a small quantity can be furnished. It is hoped, therefore, that some measure will be taken to supply the men who are developing the country with arms to protect them against the savages of the Territory."..... "There is a large portion of this Territory almost unknown and uninhabited, because of this hostility, and, as I am informed, comprising as much mineral wealth as that already discovered, together with a fine and extensive agricultural region." And he adds: "There is no necessity hereafter for buying a pound of flour, or pork, or beef, or mutton, or any kind of vegetables, from any State or Territory. The very best of wheat and barley have been raised in the valleys of Gellatin, Deer Lodge, Jefferson, and wherever they have been planted, and yet there are millions of acres lying idle, only awaiting the hand of energy and industry. We want these facts, for such they are, known to the entire country, and you must do your share of the duty in propagating them. When well known, the time will be short indeed for every valley to be filled with tenements, and every hill shafted and tunneled, with mills on all the streams, separating the gold and silver and copper from the rough and brittle quartz."

Pennsylvania.

From Dr. Lamborn's story, in the *Iron Age*, of the recent excursion among the mines of Pennsylvania, we condense the following: Up the summit of Mt. Pisgah are the engines of the Lehigh Coal and Navigation Company, by which their coal cars are drawn up the planes to the head of the back track. The coal lands of the company extend from a point near Tamaqua to the eastern extremity of the first or southern anthracite coal field, and contains 6,000 acres. Their mines are the "East Lehigh," "Room Run," "Summit Hill," "Panther Creek," and "Tamaqua." The total production of these mines for 1865 is 517,025 tons. The Switchback railroad belongs to the above-named company, and the coal brought over it is loaded on the boats in the canal at Mauch Chunk; none of it goes by rail. The Lehigh Navigation canal extends from Mauch Chunk to Easton, about 46 miles. At the latter point the boats pass into the Morris canal, extending across New Jersey to New York, or taking a more southern route, reach the same destination by the Delaware and Raritan canal. From Easton a large fraction of the coal reaches Philadelphia by the Delaware Division canal. The Switchback is not by any means the only feeder of the Lehigh canal; an extended system of railroads discharge their loads at Mauch Chunk into the canal. In consequence of the interference in winter with the transportation of coal, the company are building a railroad alongside of their canal. This road will extend from Wilkesbarre, or Whitehaven, to the New Jersey shore, opposite Easton. The Lehigh Valley Railroad now follows a similar route, so that the two railroads and the canal will be

side by side with only the river between them. The Lehigh Valley railroad carries an immense coal tonnage, and its great system of roads among the coal mines, as well as its through connections, and its immense local, coal and passenger business, make it one of the most important trunk lines in the State. In 1864 there were 1,631,878 tons of coal transported over the road; the rolling stock consisting of 51 locomotives, 142 freight, 10 passenger, and 2,575 coal cars. The length of track, including sidings used exclusively as coal roads, is 129 miles. Some idea may be formed of the extent and importance of the coal trade in the Lehigh region from the fact that nearly 8,000 men and boys are employed in the mines, which produced last year 2,040,913 tons of coal. The amount actually employed in mining is about $10,000,000, while the investments in coal lands, railroads and canals, may be estimated at $50,000,000. At Mahonoy City we became the guests of the Reading railroad, and its enterprising Vice-President, Mr. John Tucker, acted as our guide. At the foot of Mahonoy Plains, we found, in a fine house, built far out here, almost beyond civilization, a sumptuous and most welcome lunch. After partaking of this refreshment, we took our train again, and dashed on amid what seemed to be an interminable number of collieries. Stopping at one of them for a few minutes, the party had the opportunity of seeing a coal-breaker and its accompaniments. We did not stay long, however, but ran rapidly on to the two Gordon Planes—remarkable for their length—up which we were drawn; then on down the great "Horse Shoe" of the Mini Hill railroad, and finally reached Schuylkill Haven; thence up the Reading railroad to Mt. Carbon. The third day we left Mt. Carbon. A ride of a few hours brought us to Lebanon, where, without changing cars, we ran down on the North Lebanon railroad to the celebrated Cornwall ore mines, owned principally by the Messrs. Coleman. We can speak but briefly of this great deposit of iron ore, by far the most extensive in the State. The ore, which is magnetic, is embraced in three hills, having a range nearly east and west. The largest, or "Big Hill," is elevated 312 feet above the creek which runs at its base; the middle hill is 98 feet high, and the western hill about 80 feet high. The ore is contained in a basin of trap rock, and it is estimated that there are thirty-five millions of tons above the water level. A circular railroad winds around the largest mill, and has greatly increased the facilities for obtaining the ore from the lots which contain less sulphur than that further from the surface, and is therefore preferred for smelting. In 1865 there were 165,000 tons of ore mined here. The product this year, owing to increased facilities for mining, will probably reach 200,000 tons. As much as 1,000 tons have been taken out in a single day .....The Pittsburgh *Mining and Manufacturing Journal* of Nov. 29th says: The coal mines of Birmingham, next to Alleghany, the principal town bordering Pittsburgh, on the left bank of the Monongahela river, on which side also the coal pits are numerous, are remarkable from the fact that, instead of being entered by shafts sunk perpendicularly, they are worked by what are technically called day-holes—openings which pierce the precipitous banks of the river horizontally. It is from the comparative cheapness of this manner of working the coal-pits of Pittsburgh, and their proximity to the river, which enables the coal, without changing car, to be rolled direct from the workings in the pit to barges in the river below, that Pittsburgh coal-owners are enabled to supply so cheaply the manufacturers of their own city, and to ship large quantities of coal to less favored localities. .....There are eight distinct iron producing regions to which the manufacturers of Pittsburgh have access in obtaining their ores, and the ores of each are distinctive in their character. They are as follows:—1st, the Allegheny river region. 2d, the anthracite region of Central Pennsylvania. 3rd, the celebrated Juniata region of Pennsylvania. 4th, the Big Beaver basin, including the contiguous ties of Eastern Ohio. 5th, the fine ores of Missouri and Lake Superior, smelted in furnaces erected at Pittsburgh. 6th, the Hanging Rock region of Ohio. 7th, the Kentucky and Tennessee region. 8th, the Youghiogheny river region of Pennsylvania. .....The oil interests are not dead. They promise to build up in Northwestern Pennsylvania, a region that promises to be as prosperous as the anthracite coal district of Schuylkill. It should be borne in mind that, notwithstanding all the talk about the riches of other oil regions, the great bulk of our export is the product of Pennsylvania, the oil of other regions not meeting with a ready sale in foreign countries, owing to the inability of refiners to deodorize it sufficiently. To Pittsburgh, Cleveland and Erie this interest has become an immense source of wealth and prosperity, for not merely in the transportation and sale of it do they thrive, but in the refining of it they have reared up a constantly augmenting industry....

The Titusville *Herald* believes that the pumping wells on Church Run, one and two miles northeast of that city, are fed from an immense subterranean reservoir of oil, a few miles further up. Some practical men have been and are now testing the very location of the supposed parent stream, and hope in a few months to strike flowing wells. If they do, why then, as the *Herald* says, "Again would Titusville see the flush times of the Noble and Coquette wells, again would its streets be crowded with Eastern capitalists, and trade once more would revive with all the vigor of the good old times.

Oregon.

From the *Oregonian*, Oct. 27th, we take the following: Eagle Creek district, as most are aware, is situated thirty or forty miles east of Grand Ronde Valley. Though of recent discovery, it promises soon to rank among the first in the richness of its ledges of gold and copper. Already over 300 ledges are located, and of this number twelve or fourteen that have been opened, prove to be very rich. Every ledge that has been examined has been found as it descends to grow wider, and its rock to increase in richness. The ledges are said to be unusually well defined. Some of them stand twenty feet or more above the ground. The *Gem of the Mountains*, as we are informed, is the best developed of any. So far as known it is the richest ledge in the district. A ton of average rock gave a yield of $114. A five stamp mill is now running on this rock. The ledge and mill are owned by the "La Grand Gold and Silver Mining Company." The mill has been in operation but a short time, and was put up at a cost to the company of about $12,000. The Gem ledge sells at twenty to twenty-five dollars per foot. Were it in Owyhee it would no doubt command several times that sum. Its richness and permanency are known to be beyond question. The company have taken 300 tons of rock which they now have ready to crush. The ledge widens rapidly as it descends. The *Portland*, *S. Y. Cook*, and *Golden Eagle* ledges rank very high. They vary in width from two to ten feet. We have not been furnished with an account of the value, per ton, of the rock that has been taken from them. This district has several advantages over others, among which may be named cheap labor and provisions and an abuneance of wood and water. There are good roads leading to it, and it is easy of access at all seasons of the year. A letter in the Walla-Walla *Statesman* from the Eagle Creek mines says: The La Grande Gold and Silver Mining Company have their office in La Grande. They own nine mining claims, or 3,700 feet on each of nine different ledges; five of which promise well, and three are rich. One, the Gem Ledge, is very rich. Five ton, worked in an arastra, yielded $114 per ton, and was only an average lot of quartz. The company have out from 200 to 300 tons of good quartz. They have a five stamp mill, which will be running in ten days, when you will be duly informed of the result. Stock in this company sells readily at $10 per share. The Directors have judiciously kept the company out of debt. Many of the ledges have been made real estate. The "Humboldt Gold and Silver Mining Company" have their office in Gem City, and have 2,700 feet on each of nine different ledges. They own in all, 23,400 feet of quartz. The company have done all their own work. All their ledges have been improved, and five of them made real estate. They are also owners on the Gem ledge. Both companies have tunnels run down in this ledge to the depth of ninety feet. The ledge has widened from eight to thirty-five inches and grows richer. Their finances are low, but not embarrassed; have not been able to put up a mill. The "Granite Mountain Company" have their office in Portland, and have 5,000 feet of quartz in all; they own in the "Portland," "Oregon," "Nelson," and "S. Y. Cook" ledges. The company have a water wheel erected and in motion, (a turbine) that gives thirty horse power; they have a furnace built but have not got in all their amalgamating pans yet. (Ayer's process). Wood and water in abundance; they can have one hundred feet fall if it is required. Their ledges are situated in Granite Mountain range, fifteen miles north of the above company, and vary in width from eighteen inches to twelve feet wide, and men who profess to be good judges say that they have three ledges that will work $80 per ton. A tunnel run in on two of these ledges 300 feet would be at that distance, at least 3,000 feet below the surface, and the ledge is traceable over this high mountain. The company, as I hear, is entirely free from debt. They have but one thousand shares in the company and their stock sells for $25 per share. I have not examined the copper interest much; I hear the "Shrive Copper," and the "Eighty per cent," mint 90 per cent., the "Checkmate" and "Grand Daddy," (three ledges) are spoken very highly of. The Eugene *Journal* says that some fine specimens of gold-bearing quartz were brought to that town last week by Mr. Neff. The quartz was obtained on the north Umpqua river, near its source. It is thickly sprinkled with the glittering ore, and begets visions of wealth in the minds of the discoverers. There are prospectors out in that region now, and we hope they may be eminently successful.

California.

Sierra.—The *Mountain Messenger*, of Nov. 3, says: Independence Quartz company, at Sierra Buttes, are running a westerly adit level on the vein, in very rich rock, with one hundred and twenty feet back. They will soon intersect a shaft which is being sunk in the heart of a rich chimney, at which point the vein is sixty feet wide. Shaft is down forty-eight feet, and the ore improves as the shaft progresses. In the easterly level there are one hundred and twenty feet yet to run to strike a chimney of ore that in the upper level paid $30 per ton. Previous workings have proved that the deeper they go the richer the ores become. The present or adit level is three hundred and ten feet from the surface.....Keystone is quarrying rich rock. The adit level is rapidly progressing..... Montpelier company is crushing Sailor rock with good results. The rock is paying about $80 per ton. Their new flume is approaching completion. The adit level is daily expected to strike the Wheeler vein, when a new mill will be erected.....The Good Hope company are custom crushing at the Gold Bluff mill: rock averaging $30 per ton .....The Page Ledge, in Sailor Ravine, has been purchased by Clark & Co., of San Francisco, for $12,000. It is under the management of Mr. A. O'Neill, who is proceeding to develope it. The ores are very rich, consisting of arsenical pyrites, which, when decomposed, will pay with a wash-pan from $2 to $3 per day to the hand .....Johnson & Co., southerly extension of Page ledge, have struck the vein six feet wide, with rich prospects, in several places on the line of their claim, proving it not spotted, but continuous and reliable.....Ladies' Canon company, at Ladies' Canon, a recent discovery: the ores are rich and abundant. Massive pyrites, with which the vein is heavily charged, assay from $300 to $400 per ton. The ore will pay to ship, or for the erection of chlorodizing works.....The Mexican company, at Downieville, have had a test crushing machine made at the Montpelier mill, which yielded $12 per ton, fine gold. Concentrated sulphurets assay at the rate of $830 per ton..... Slug Canon claim is quarrying rich ores from a vein recently discovered. .... A quantity of rock from the Oro company's mine was recently crushed at the Montpelier mill, resulting in a yield of $12 per ton .... Parties from San Francisco are negotiating for a purchase of the American Hill mine, in connection with a rich deposit of cemented gravel, in an extensive ancient river channel, covered a hundred feet deep by basaltic lava. This deposit of gravel is about forty feet deep by seven hundred feet wide, and has never been worked.

Calaveras.—The *Chronicle*, Nov. 3, says: Hoerchner, Myers & Co. are steadily pushing work forward on their claim near Middle Bar. Their tunnel is now in about sixty feet, and has been run directly on the lode. The vein averages about five feet in width, and all the rock prospects exceedingly well..... Myers, Wesson & Co are still at work on their claim in Jackass Gulch. They have sunk a shaft about forty feet in depth, and are still going down. Indications are very favorable that they will ultimately develope a paying mine. The lead is wide and the rock all contains gold ..... Work has been suspended on the Sulphuret claim, in Dutch Gulch, for some reason. A shaft has been sunk on this lead to the depth of a hundred feet, and the vein, which is about twelve feet in width, is an almost solid mass of gold-bearing sulphurets. Wallace, Cockley & Co. have developed one of the best leads in the county, at Whisky Slide. They have sunk a shaft a hundred feet deep, and at that distance from the surface the lead is a solid, well defined mass of rich quartz, averaging seven feet in width. We have been shown some of the rock, all over the surface of which the precious metal was visible. It is estimated by competent judges that the quartz will yield from two to three hundred dollars per ton.

Alpine.—The *Alpine Miner*, of Nov. 3, says: The Mowyer tunnel struck through the hard rock they have been encountering lately, and have cut a small vein of exceedingly rich black sulphuret ore. Should the vein widen, or lead to a body of the same character of larger size, Mowyer stock will go up in the figures, and with even the vein in sight they have a good thing. .....Work is once more commenced on the old favorite, Boulder Hill. J. B. Scott has secured control of the old Pioneer location, and also of the old Scott's Hill consolidated tunnel, and is now building a house at the mouth of the tunnel, preparatory to commencing work. It is the intention of Mr. Scott, as we hear, to make a turn in the tunnel to the left, expecting to strike the celebrated Pioneer lode in from a hundred to a hundred and fifty feet..... Mr. E. L. Hoxey has secured some good mining properties in Alpine, for which he intends to get working capital among his Illinois friends.

Michigan.

The Keweenaw *Times*, of Nov. 17, says: The steamer Northern Light left this port on Wednesday evening last, having on board one hundred and sixty-six tons of copper, mostly masses; one hundred and seven tons of this belonged to Copper Falls, and forty-nine to the Central. The smaller masses, and all the stamps, mineral and barrel work was lowered into the hold, but notwithstanding this her deck was literally covered with copper. Capt. Murch stowed it away as snugly as he could, but he was obliged, after all, to leave twenty tons of Copper Falls masses behind. This is bad, as the chances for shipment this fall are slim indeed.....The show at the Madison continues to be as good as ever in the lighter grades of mineral, viz: rich stamp and barrel work. They have just commenced sinking, about six feet south of the present end of the drift, in the sole of the level, and design, we are advised by Capt. Uren, to continue this sink back to the winze sunk in early summer, to connect the levels. They are now down ten or twelve feet, with a good

vein showing. The vein is fully two and a-half feet in width, and completely tied together with copper .....Speaking of a recent visit to the Seneca mine, the same paper says: The vein from which these several pieces of copper shown us were taken, is said to be from six inches to three feet in width, and carrying copper wherever opened on in considerable quantities It is estimated that there is exposed in the pits and shafts several tons of copper, and that from the point where one of the pieces shown us was taken, there was at least three tons of copper in sight .... The Lake Superior *Mining Journal*, Nov 24, says: The Pittsburgh and Lake Angeline Iron company shipped three hundred and ninety-seven tons of ore during the week ending Nov. 24th. Total, 26,782 tons .... The Elmwood (Illinois) *Observer* says that a mass of pure copper, weighing twenty-two lbs., was found a short time since a few miles southeast of that town. It says it may be credited to the Lake Superior region, having probably been brought by the drift, as boulders are supposed to have been removed from the Western mountains .....The Ontonagon *Miner* says of the National mine: Shafts Nos. 2 and 3 are connected on the level with each other and with No. 1. East of No. 2 shaft on this level the vein is fair and increasing in value as the stopes rise. West of the shaft the stopes are also producing well. East of No. 3 shaft the Conglomerate and Middle veins seems to run parallel with and adjacent to each other for one hundred to one hundred and fifty feet, rendering it difficult to say just where the connection begins or ends. They are now stoping here with excellent results in the smaller varieties of copper coming from a vein of unusual width on the conglomerate belt. On the 90 the mass lately blasted down proves much larger than was supposed. One mass of six tons cut on two sides came down on Thursday, and two of nearly equal weight from the same block are expected here to-day or Monday. The removal of this fifteen or eighteen tons has exposed more ground, equally promising for immediate attack. Over one hundred tons of mineral have now been taken from this point, and this has been taken from one hundred fathoms of vein, a very good work for a vein of moderate pretensions. The stopes over the 80 west of No. 2 are producing well in heavy copper—a five-ton mass was taken down last week, and one of three tons or over this week, and the vein on either side for 50 feet is almost equal to mass copper now. This occurs in a splice of the two veins, such as we have just described on the 10th level. On the middle vein proper, some very profitable stopes are being worked—the veins 3 to 4 feet wide and rich in stamps and barrel work, with not unfrequently a mass of a ton or so for good measure. ....."Frontignac Mining Co." is the title of a new company just formed on the north half of the Calumet mine lands, and containing 3,100 ft. of that famous lode.

Idaho.

The *Avalanche* of Nov. 3rd gives the following items from the Owyhee district:—The value of bullion assayed by King, Webb & Co. during the month of October is $204,847 94. Blake & Co. had not finished up their work for the month. The total for October will crowd $400,000 pretty closely .....The Morse & Vass mill—four stamps—at Silver City is being removed to Flint district by Russ Carter and L. W. Greenwell, for the purpose of working the Rising Star ledge .....The N. Y. & Oro-Fino mill, on Sinker Creek, closed work on the "Poorman" the first of the month for the winter. Over 900 pounds of the first-class Poorman ore was discovered, by means of a search-warrant in the hands of the sheriff, in a cabin on War Eagle mountain. The N. Y. & Owyhee Co. secured several thousand dollars worth of rich ore in the operation, and persons disposed to filch rich ore are given to understand that justice will be meted to them. Not long since a man was caught, and owned up to taking rich ore from the "Silver Cord" ..... Geo. S. Norris, Esq., an old Nevada miner, is engaged in driving a tunnel by contract on the Hays & Ray ledge, which will strike it at a depth of 150 feet below the South Poorman shaft, and there is a possibility of letting a contract to run another tunnel 100 feet still lower on the ledge. This done, the mine will be in excellent condition to take out immense quantities of ore next year, and leave the mine well drained and ventilated .....We made a call at the new Woodstock ledge last week and found the owners at work in good earnest. This discovery is down the mountain side, and while at the works we were shown some rock very rich in both free gold and silver sulphurets....Steam hoisting works have been erected at the Surplus Oro-Fino, and work on the mine will soon be commenced again .....A recent issue of the same paper, alluding to a visit to the celebrated Poorman mine, says: The wealth of the mine is everywhere visible—above, below and the entire length as worked. The vein matter, as it appears in the mine, resembles a plum pudding—plums representing the solid black sulphurets and ruby silver from the size of a walnut up to twenty and fifty pounds weight. Sunday last the workmen had in tow a piece of ruby silver and sulphurets that, if gotten out whole, would weigh over five hundred pounds. Through carelessness of some of the miners, it was cracked in two before leaving its bed. We "held a candle to it" on one side, where the space between the ore and casings permitted a view of about one foot square, and the surface indicated was solid, sparkling ruby silver. This piece looked to be about four feet long by two wide and one in thickness. The accident to it is greatly to be regretted. After tramping up the outside and crawling through the inside of War Eagle for three straight hours, the sight of the New Jerusalem paved with gold would become nauseating.

Wisconsin.

From the Superior *Miner*, of Nov. 27, we take the following: The *Enterprise*, published at Collingwood, says: "The American company, at work at the Batchewaning mines, have lately been rewarded by striking a vein, not only inexhaustible in extent, but of the finest description of Magnetic Iron Ore. Active preparations are being made to develope the mines during the coming season. It is said that this ore is of the very best description for making steel, and will give large profits to the company who are working the mines."....A correspondent of the *Times* says: We spent two days last week in exploration of the new copper discoveries on Copper creek, thirteen miles from Superior City. The journey thither was the most difficult that we have ever encountered, the only (and a very considerable) mitigation to the evils of which being the inspiring presence of some adventurous and not easily discouraged Philadelphia ladies, and all being under the guidance of that prince of good fellows, known to all Superior travellers, Mr. Thompson Ritchie. Two companies have been organized for the working of mines in this region—one known as the "Copper Creek Company," and the other the "Wisconsin." The prospects of these companies are exceedingly good, the veins thus far exposed exhibiting very rich ore Neither company has a stamping machine in operation, but another season will doubtless see the mines yielding a rich profit. Very little is heard of this mining region because of its inaccessibility, but a moderate expenditure upon roads will bring within reach a mining territory as promising as many of the well known localities on Keweenaw Point. A valuable discovery has recently been made on the north shore of Lake Superior, about thirty-five miles northeast from Superior City. A very large silver vein has been uncovered directly upon the shore, and near Encampment Island. The vein juts out at the water's edge, and has been traced back a distance of two hundred feet. All who have seen the vein agree upon its obvious richness, and one man (E. W. Anderson, Jr., of Superior City,) was bright enough to secure the land at the earliest moment. Surely this is a country underlaid with riches, the extent of which is very little known as yet. What with the iron at Marquette, the copper at Portage, silver at Encampment river, and possibly gold at Vermilion, it would seem that there is no limit to the mineral resources. If speculators would only have a little regard for actual values, and not for mere printed circulars, mining operations would not be so much in disfavor, and the true wealth of the country would be sooner developed.

Minnesota.

The Superior *Miner* of Nov. 24th says: Within the past three weeks there have been several arrivals here from Vermillion. Among those lately down are Messrs. Farnham, Symonds and Merrill, of St. Paul; Mr. Scott, of Superior, and Dr. Mosely, of New York. From them we learn that the crushers forwarded by the New York and Minnesota Company, have been at last got in working order, but owing to the miserable character of the boiler, and in fact, the worthlessness of all the machinery purchased by this company, nothing more than a mere test of the rock was made. The result of this test is, however, very satisfactory, and proves without question the existence of gold in paying quantities in the Vermillion district. The crushers were tried on eight hundred pounds of rock—average stuff—and the yield in fine gold is equal to $25 per ton. Dr. Mosely, who had charge of the works, informs us that he was at first very skeptical as to the existence of gold in that region, but he is now forced to change his opinion, and believes that, with machinery of the latest make, the yield would have been much larger. Mr. Mayhew is still sinking on the vein of Minnesota Point, and expects to continue at work during the winter. The Chicago company have their winter quarters erected; but whether they will work a large force this season is not known. For the present, surface explorations are at an end, owing to the amount of snow which has fallen. Mr. Merrill, who has been exploring in the new district near Bois Blanc Lake gives it as his opinion that the silver lodes of that section (of the existence of which he has no doubt) promise to prove very rich. He brought down some very fine specimens, which he purposes having tested. Mr. Symonds, the manager for the New York company, left for New York about ten days since, carrying with him the bullion got out by their crusher, and informed us that he purposed sending in supplies this winter, so as to prosecute the work with vigor next season.

Arizona.

Governor McCormick's message, delivered Oct. 8th to the Territorial Legislature, contains the following: If there is less excitement over our mining interests there is more confidence in their excellence, and a strengthened belief that their development will surprise the world. Ten quartz mills will have been erected in this county alone before the close of the present year. Those already in operation afford a gratifying evidence of the value of the gold ores, and as the lodes are sunk upon they show permanence and size. The appearance of sulphurets and refractory elements at a certain depth may involve the necessity of more elaborate machinery, but no obstacle will, I think, be sufficient to baffle the enterprise of our miners, who, depending more upon their own energies and capital than upon help from abroad, are determined to know no such word as fail. The rare advantages of wood, water and climate, are more than sufficient to offset the costs of living and the heavy expense of transporting machinery here, and I believe, as I have often asserted, that there are few localities upon the Pacific coast where quartz mining may be so economically, agreeably and profitably pursued ... The conflict with the Apache continues, and will continue, I fear, until we are supplied with troops better suited to fight him, or the product of our mines is such as to attract a large population, and so literally to crowd him from the scene of action.....The Arizona *Gazette*, Oct. 28th, says: The roads between La Paz and Prescott, and La Paz and San Bernardino, are lined with teams .....After a long delay, active measures are being taken to develope Arizona. In southern Arizona money has been wasted by incompetent superintendents in the most foolish manner; which, had it been disbursed by capable and careful men, would have been amply sufficient to develope some of the rich silver veins of that section, and open up an extensive and valuable region to the ingress of capital.

West Virginia.

The Parkersburg *Gazette* of Nov. 29th, says of the resources of West Virginia: The oil regions alone hold out the promise of the highest prizes to those who are willing to devote to the earth's crust here the same earnest efforts which they are free to expend upon the lodes of Nevada and Montana. A good producing oil well is worth ten times the value of an ordinary mine of silver or of gold, long experience has proved this fact. So far from the available oil country being occupied, there are tens of thousands of acres, as promising as any at White Oak, or Burning Spring or Oil Rock which are yet entirely innocent of pumps or engines. All this territory is to be developed by somebody. Numerous fortunes are still to be made by boldly penetrating these hills and draining from their bosoms their hidden wealth Our valleys are fertile, and will produce corn and sorghum and wheat in sufficient quantities to sustain a population as dense as that of Lombardy or Kent. The finest mutton in the world is raised upon our hills, as all who have sojourned at Cork's tavern can testify. We have coal, iron, lead and oil in inexhaustible quantities, and almost at our doors; why then should not our State grow rapidly in wealth and population. Let us invite immigration; let us make the attractions of our territory known, and then tens of thousands of men in the Atlantic cities, who are actually suffering for want of most common necessaries of life, and who could find profitable employment here would our "men of money" inaugurate the business of developing our resources. No better time than the present could be desired for starting refineries and blast furnaces and for sinking shafts into our hills.

Washington.

The Walla Walla *Statesman* says: We learn from Mr. John O'Donald, who is down from Colville, that quite an excitement existed in that place at the time he left, in regard to some very extensive mining ground just discovered on Arrow lake, about half way between Colville and the Big Bend country. Nearly the whole population of Colville stampeded for the new diggings. About five miles of country has been prospected over, and Mr. O'Donald was assured that from ten cents to six bits to the pan was easily obtained. The steamer "49," Captain Len. White, runs past the new diggings, *en route* to the Big Bend mines. Mr. O'Donald brought quite a lot of the dust with him, and it is pronounced to be worth $18 per ounce; the dust resembles Mormon Gulch gold of California. It is certainly good for some eyes to get a sight at such dust as "Uncle John" has on exhibition. Captain White is in good spirits; the last trip of the "49" took up forty passengers and a large lot of goods to the new diggings. We are glad to learn that we have such diggings so close at hand, and hope that they may prove not only rich but extensive.

British Columbia.

The *Colonist*, Oct. 15th, says: Mr. D. F. Adams arrived from Big Bend on Saturday evening and reported that "Nabby" Jack and "Johnny" Bing had discovered a new creek about 100 miles south of the steamboat landing on the Columbia, which prospected 25 and 50 cents to the pan of dirt. Provisions in the Big Bend country were rising; packing from Seymour across the divide was fifteen cents per pound, and the last storm probably closed the trail for the season. .....A few men remained on the creeks. Several shallow claims paid well, but were nearly worked out. The Fort Yale shaft, on McCullough creek, is regarded as the one that will test the diggings. The bed-rock has been reached and found pitching.

The Richest Copper Mine of Lake Superior.

The Calumet Mine in the portage Lake district exceeds in richness anything ever before discovered on this lake; though working only a few months, it is taking out daily from thirty to fifty tons of mineral, which average more than twenty per cent.; equal to a product of five or six tons of ingot copper, worth not less than $3,000 to $4,000 per day. The mineral is sent to the smelting furnaces, just as it comes from the ground, without dressing, stamping, or any preparatory manipulation. These results not only exceed any reached by the richest and longest established mines, but they mark a new era in Lake Superior mining. If mineral can be raised and converted into ingot copper without the intervention of stamping, and the other costly intermediate processes, it is easy to see that the received theories of mining must be revised and adapted to the new order of things.—*Superior Miner.*

GOLD.

COMPANY.	SHARES.	STOCK.	SITUATION OF MINE.	SECRETARY & PLACE OF BUSINESS.
Acadia			Nova Scotia	H. W. Nelson, 24 City Ex., Boston.
Ada Elmore	200,000	$2,000,000	South Boise, Idaho	B. Lawrence, 157 B'way, N. Y.
Amber	300,000	300,000	Greene Co., Penn	Geo. W. Grove, 276 S. Third, Phil
Albion		300,000	Halifax, Nova Scotia	H. W. Nelson, 24 City Ex., Boston.
Alps	100,000	250,000	Illinois Central Dist., Col	J. Stanton, Jr., 25 Nassau, N. Y.
Ascot	50,000	5,000,000	Sherbrooke, Canada E	G. H. Morrison, 17 Nassau, N. Y.
Atlantic				Chas. Barett, 13 Doane, Boston.
Atlatic & Pacific	50,000	5,000,000	Humboldt T., Humboldt co.	J. N. Sewall, 8 Broad, N. Y.
American	100,000	5,000,000	Gregory Dist.	
American Flag	60,000	600,000	Nevada Dist., Col	H. Foles, 71 B'way, N. Y.
Astor	200,000	1,000,000	On Comstock Lode	J. Chapman, 71 Broadway, N. Y.
Baltic			Colorado	New York.
Bates & Baxter			Colorado	New York.
Bay State	200,000		Colorado	Lem'l Bangs, Boston.
Benton	100,000	500,000	Colorado	F. W. Capen, 44 Ex. Pl., N. Y.
Black Hawk	50,000	5,000,000	Gilpin co., Col	D. Littlejohn, 81 John, N. Y.
Beacon		500,000	Halifax co., Nova Scotia	J. H. Post, 20 Ex. Pl., N. Y.
Bobtail	100,000	1,000,000		J. Stanton, Jr., 25 Nassau, N. Y.
Briggs	10,000	1,000,000	Gilpin co., Col	D. Littlejohn, 81 John, N. Y.
Bradshaw	250,000	1,000,000	Yavapai County, Arizona	O. H. Vanover, 219 Dock st., Phil.
Burroughs	100,000	1,000,000		L. Bangs, 22 Pine, N. Y.
Bullion	200,000	1,000,000	Bannock, Montana	69 Liberty, N. Y.
Bullion Consoli.	300,000	300,000	Summit and Clear Creek, Col.	J. P. Whitney, 19 Lindall, Boston
Calvin	200,000	1,000,000	Clear Creek co., Col	
Canadian				A. Call, 7 Phœnix B'l'g, Boston.
Chem. Gold&S. R			Eldorado Company, Cal	64 B'way
Church Union	240,000	1,200,000		Jesse G. Pitts, 69 Liberty
Chebucto	100,000	500,000	12 miles from Halifax	J. E. M. Gilley, Boston.
Clarendon		500,000	5 miles from Halifax	H. Doane, 41 State, Boston
Chase	5,000	500,000	Colorado	W. E. Lawton, 81 John, N. Y.
Central Gold M.	20,000	1,000,000	Central City, Col	L. Bangs, 17 Nassau, N. Y.
Central Mining	200,000	1,000,000	Colorado	46 Exchange Pl., N. Y.
Chandiere	100,000	500,000	5 000 A Famine Riv. C. E	Wm. B. Fowle, Boston.
Cobden	100,000	1,000,000	Idaho	New York.
Colonial				W. N. Ely, 7 Trav'r B'l'g, Boston.
Colorado Boston			Colorado	R. C. M'Laughlin, 60 State, Bos'n.
Colorado N. Y.			Colorado	12 Pine, N. Y.
Coleman			Colorado	New York.
Columbia	30,000	3,000,000	Austin City, Nevada	10 Pine, N. Y.
Consuelo Gold				54 William.
Consol Gregory	50,000	5,000,000	Gregory Dist., Col	30 Pine, N. Y.
Cook & Kimball	1,000	150,000	Colorado	W. W. Baldwin, 35 Wm., N. Y.
Copalinshee	250,000	5,000,000	Parke co., Col	J. C. Stocker, 137 B'way, N. Y.
Corrisance	100,000	1,000,000	Colorado	New York.
Commonwealth			Nevada	Philadelphia.
Corrydonn	100,000	2,500,000	Gilpin co., Col	46 Exchange Pl., N. Y.
Continental	20,000	2,000,000	Gregory Dist., Col	115 Liberty, N. Y.
Central Gold	200,000	1,000,000		L. Bangs, 22 Pine, N. Y.
Dauphin & Colo.	200,000	1,000,000	Colorado	John S. McMullin, 423 Walnut, Pa.
Day & Bushnell	300,000	3,000,000	Colorado	T. Chalmers, Jr., 20 Ex. Pl., N. Y.
e Lery		10,000,000	Chandiere Valley, Canada E.	J. M. Winchell, 72 Cedar, N. Y.
Denver	50,000	1,000,000	Gilpin & Clear Creek, Col	J. Wadsworth, 61 Cedar, N. Y.
Devonshire				W. Stockbridge, 74 Fr'klin, Bos'n.
Downieville	300,000	300,000	Colorado	J. C. Harriott, 70 Wall, N. Y.
Dorset			Chandiere River, C. E	F. McJimsey, 59 Wm., N. Y.
Eagle	100,000	1,000,000	Gold Dirt Dist., Col	J. P. Davies, 81 John, N. Y.
East Bannack	100,000	200,000	Bannack City, Montana	J. Callender, 48 Ex. Pl., N. Y.
Eldorado	500,000	2,500,000	San A Dist., 9 miles of Austin	208 S. Fourth, Phila.
Empire Mill & M				O. F. Griffin, San Francisco.
Enriquetta			Arizona	New York.
Esperanza		500,000	Star D., Humboldt co	117 Broadway, N. Y.
Etna	60,000	500,000	Nevada Dist., Col	C. W. Bryant, Boston.
Excelsior	30,000	300,000	Central City, Col	J. Weatherbee, Jr., 11 P. B'g. Bos.
Fairmount	20,000	200,000	Colorado	John P. Harker, 109 N. 6th, Phil.
Famine Falls	100,000	1,000,000		D. L. Dodge, 80 B'way, N. Y.
Garrisons	100,000	5,000,000	Colorado	C. G. Mease, 29 William, N. Y.
Gem	25,000	1,250,000		H. K. Gates, 191 B'way, N. Y.
Georgetown			Colorado	New York.
Gilbert River				C. E. Jackson, 18 Phe'x B'g. Bos'n.
Gilpin				C. W. Galloupe, 76 State, Boston.
Golconda	250,000	5,000,000	Sherbrooke, Canada E	W. H. Adams, 19 Broad, N. Y.
Gold Field				C. B. Cowling, 39 Kilby, Boston.
Gold Rock	5,000	500,000	Central City, Colorado	R. M. Lockwood, 113 Wall, N. Y.
Gold Hill	50,000	500,000	Colorado	W. T. Eustis, Boston.
Gold Mountain	600,000	6,000,000	Clear Creek Co., Colorado	25 Nassau, New York.
Gold Min'g of Col	50,000	5,000,000	Colorado	E. Latham, 23 William, N. Y.
Golden Gate	60,000	600,000	Sum. High'd&Mill C. D., Mon	J. Morse, Jr., 117 B'way, N. Y.
Gunnel Central			Colorado	70 Broadway, N. Y.
Gunnel Gold	300,000	3,000,000	Colorado	F. E. Roelfson, 78 & 80 B'way, N. Y.
Gregory	20,000	1,000,000	Colorado	Thos. Wildes, 17 William, N. Y.
Granada	50,000	125,000	Colorado	J. Stanton, Jr., 25 Nassau, N. Y.
Great Western	60,000	600,000	Russel Dist., Col	E. Kemeys, 70 Broadway, N. Y.
Gunnel Gold	100,000	1,000,000	Colorado	F. E. Roelofson, 78 B'way, N. Y.
Halifax				A. Case, 7 Phœnix B'l'g, Boston.
Harmony				Demas Barnes, 21 Park Row.
Hemit'ge Ranch	30,000	300,000	El Dorado, Cal	
Home	80,000	2,000,000	Gold Dirt Lode, Gilp. co., Col	J. P. Davies, 81 John, N. Y.
Holman	150,000	300,000	Gilpin co., Col	J. O'Neill, 24 Nassau, N. Y.
Humboldt	100,000	500,000	Colorado	78 B'way.
Idaho Gold	100,000		Montana	5 Pine, N. Y.
Isaac's Harbor	100,000	500,000	Isaac's Harbor, Nova Scotia	W. F. Shirley, 137 B'way, N. Y.
Isle Royale				44 Ex. Pl.
Kansas Colorado	100,000	1,000,000	Colorado	J. G. Greenlies, 111 B'way, N. Y.
Kent				G. H. Wyman, 19 Phe'x B'l'g, Bos.
Kip & Buell	100,000	200,000	Colorado	J. C. Harriott, 70 Wall, N. Y.
Knickerbocker	100,000	1,000,000	Colorado	F. Avery, 78 B'way, N. Y.
La Crosse	100,000	$1,000,000	Nevada Dist., Colorado	H. Fales, 71 B'way, N. Y.
Liebig	200,000	$1,000,000	Colorado	
Lake Major	12,000	600,000	Nova Scotia	Fred. Franck, 113 Water, N. Y.
Mariposa Gold	100,000	10,000,000	Bear Valley, Cal	G. W. Farlee, 34 Wall, N. Y.
Mammoth	50,000	500,000	Colorado	J. Jarrett, 41 Liberty, N. Y.
Manhattan	100,000	600,000	Colorado	W. R. Lothrop, 172 B'way, N. Y
Massachus. Gas	250,000	200,000	Gilpin co., Col	W. D. Briggs, 11 Phe'x B'l'g, Bos
Merchants	30,000	600,000	Alturas co., Idaho	Jas. K. Selleck, 157 B'way, N. Y.
Metropolitan				
Mountain Pride	100,000	1,000,000	B'r C'k, St. Bee., Idaho	29 Pine, N. Y.
Montague	50,000	500,000	near Halifax, Nova Scotia	C. B. Cowling, 39 Kilby, Boston.
Mount Alpine			Griffith Dist., Clear C'k, Col	J. B. Randol, N. Y.
Mount Vernon	500,000	5,000,000	Mt. V. & Mam'th Dist., Nev.	25 Park Row, N. Y.
Mount Vista	50,000	500,000		J. Chapman, 23 Nassau, N. Y.
Montana	100,000	400,000	Nevada, Ills., Greg'y, Col	A. L. Guerber, 54 Wm, N. Y
Monte Christo	100,000	2,000,000	White Pine District, Nev	Thos. Dunlap, 413 Chestnut, Phil
Montezuma	100,000	500,000	Colorado	F. B. Webster, Boston.
Montrose	100,000	1,000,000	Clear Creek co., Col	C. A. W. Sibley, 80 B'way, N. Y.
Morning Star	5,000	5,000,000	Owyhee co., Idaho	E. M. Barnum, 137 B'way, N. Y.
Mexican Pacific	100,000	10,000,000	Mexico	J. Mackie, 88 Wall, N. Y.
Melones & Stan			Calaveras co	606 Mont, San Francisco.
National	300,000	3,000,000	on So. Boulder C'k, Col	31 School, Boston.
Nevada Star				25 Pine, N. Y.
New England	50,000	150,000	Black Hawk, Col	J. Weatherbee, Jr., Boston.
New Mexico			near SantaFe	
New Gregory				W. A. Kent, 144 State, Boston
New York City	50,000	5,000,000	G'd Canon D't, Land, co. Nev	10 Pine, N. Y.
New York Dist	50,000	500,000	Austin, N. Y. Dist., Nevada	71 B'way, N. Y.
New York of Col	00,000	1,000,000	Colorado	F. E. Roelfson, 74 B'way, N. Y
N. Y. & Nevada	100,000	1,000,000	Nevada	J. J. Osborn, 30 Pine, N. Y.
N. Y. G Min'g	100,000	1,000,000	Colorado	F. E. Roelofson, 78 & 80 B'way.
N. Y. & Eldor'do	250,000	2,500,000	Nevada	G. H. Munroe, 106 B'way, N. Y.
N. Y. & Idaho			Idaho	180 Chatham, N. Y.
N. Y. & Santa Fe			Nevada	New York.
N.Y. & Owyhee		1,000,000	Owyhee co., Idaho	6 Pine, N. Y.
N. Y. & Oro Fino	10,000	1,000,000	Owyhee co., Idaho	137 Broadway, N. Y.
N. Y. & Reese R			Nevada	New York.
N. Y. & Renfew				2 Murray, N. Y.
N. Y. & Washoe			Nevada	New York.
North Clear C'k	100,000	1,000,000	Gilpin co., Col	J. Francis, 80 B'way, N. Y.
N'thStar G&SM. o	10,000	500,000	Gilpin County Colorado	H C. Ballard, 88 Wash'n st Chicago
Nova Scotia				Chas. Barrett, 13 Doane, Boston
N. Y. & Nova Sc	100,000	1,000,000	Tangier, Nova Scotia	Jos. E. Gay, 3 Hanover, N. Y.
National S Min'g		1,500,000	Owyhee co., Idaho	115 B'way, N. Y.
Occidental	5,000	500,000	Nevada & Ills. C. Dist., Col	100 B'way, N. Y.
Oldham				Chas. Barrett, 13 Doane, Boston
Ophir	62,500	625,000	on Comstock Lode, Nevada	Moses A. Hopkock, 45 William.
Pacific	40,000	4,000,000		24 Pine, N. Y.
People's	100,000	5,000,000	Alpine & Sierra cos	23 Nassau.
Peck				E. R. Sawyer, 144 State, Boston.
Perigo	60,000	3,000,000	Ind. Dist., Gilpin co., Col	J. W. Stratton, 90 B'way, N. Y.
Pine Mountain	30,000	3,000,000	Pine Mountain Dist., Nev	F. K. McCully, 157 B'way, N. Y.
Phila. & Color'do	20,000	1,000,000	Central City, Col	E. W. Clark & Co., Phila.
Phelps & Gilm'r	200,000	1,000,000	Colorado	W. H. Steudevant, 25 Nassau.
Pleasant Valley	125,000	1,250,000	Colorado	J. S. Lyon, 69 Wall, N. Y.
Pontiac	50,000	1,000,000	Ill. Cen. M Dist., Col	R. H. Rickard, 19 Nassau.
Prescott	100,000	1,000,000	Central Arizona	39 B'way, N. Y.
Quaker City			Ind't D't. G'd H'l City, Col	103 South Third, Phila.
Quartz Hill		100,000	Nevada Dist., Col	J. A. Tyler, 29 Wall, N. Y.
Ranche C'k	10,200	1,200,000	Pine Wood Dist., Nevada	18 Broad, N. Y.
Realito		1,500,000	G'd Hill D., Storey co., Nev	117 B'way, N. Y.
Reese River P'l	100,000	1,000,000	AmadorDist., Lander Co., Nev	Elijah Alliger, 67 Wall, N. Y.
Renfrew				W. Stockbridge, 74 F'klin, Bos'n.
Republic	15,000	1,500,000	Amador D., Lander co., Nev	67 Exchange Pl., N. Y.
Rocky Mountain	50,000	500,000	Grey & Empire Dists., Col	E. L. Boles, 70 B'way, N. Y.
Reciprocity	100,000	1,000,000	Canada East	B. B. Grant, Jr., 71 B'way, N. Y
Scorpion			Virginia City, Nevada	617 Clay, San Francisco.
Sherbrooke	100,000	1,000,000	Sherbrooke, Canada East	F. Schumacker, Cliff, N. Y,
Silas Wright	60,000	600,000	Amador D., Lander co., Nev	18 Wall, N. Y.
Silver State	100,000	500,000	Humb't Starr. Fr. R. D. Humb't co., Nevada	R. S. Miller, 49 William, N. Y.
Silver Wave	300,000	3,000,000	Rosee riv., Lander co., Nev	Emmet Blair, 243 B'way, N. Y.
Smith & P'rmlee	125,000	2,500,000	Colorado	G. A. Lathrop, 4 Broad, N. Y.
Smithfield	100,000	400,000	Gilpin Co., Col	A. F. Baum 48 Broad st., N. Y.
Spanish		3,000,000	La Plata, Churchill co., Nev	228 South Third, Phila.
So. Clear C'k			Colorado	Canastota, N. Y.
Starlight Ledge	50,000	500,000	P'rville, El Dorado co	
Star of Color	200,000	2,000,000	Colorado	J. N. Powers, 22 Pine, N. Y
Standard	50,000	500,000	Gregory Dist., Col	T. A. Mitchell, 70 B'way, N. Y
Steptoe	20,000	2,000,000	G'd Can., Lander co., Nev	10 Pine, N. Y.
Sterling City		1,200,000	Colorado	New York.
Stewart	100,000	500,000	Colorado	C. Durham, 31 Exchange, Boston
Suffolk				Carlos Cobb, 22 William, N. Y.
Southard				Wm. Wallace, 11 Doane, Boston.
Stafford				C. E. Jackson, 15 Central, Boston.
Tascher	100,000	1,000,000	Colorado	F. J. Wright, 8 Wall, N. Y.
Texas	50,000	500,000	Black Hawk City, Colorado	Wm. E. Parish, 155 B'way, N. Y
Triunfo			San Antonio, L. Cal	San Francisco.
Union	240,000	12,000,000	Colorado	F. A. Potts, 110 B'way.
United States	75,000	1,500,000	Colorado	J. P. Stevens, N. Y
University				31 Nassau, N. Y.
Virginia City	250,000	250,000	Nevada	J. B. William, 78 & 80 B'way.
Wauba Yuma	600,000	6,000,000	Arizona	35 William, N. Y.
Waddingham	48,000	1,200,000	Alturas co., Idaho	Jas. K. Selleck, 157 B'way, N.
Waverley				J. Leighton, 97 State, Boston
Windsor Gold M	10,000	100,000	Colorado	25 William, N. Y
Wilson & Cass			Colorado	New York

LEAD.

COMPANY.	SHARES.	STOCK.	SITUATION OF MINE.	SECRETARY & PLACE OF BUSINESS.
Amenia	100,000	$ 500,000	Duchess co., N. Y.	G. Furman, 77 Cedar, N. Y.
Bucks County	10,000	200,000	Bucks co., Pa	R. R. Sinclair, 53 Ex. Pl., N. Y.
Canada	40,000	250,000	Canada	Alb. Case, 7 Phe'x B'l'g, Boston.
Clute	150,000	550,000	Macomb T. St. Law. co., N. Y.	Rev'l'y S. Merrill, 42 Cedar, N.Y.
Continental	200,000	500,000	Martinsburg, N. Y.	J. Sickles, 57 Ex. Pl., N. Y.
Eastport	100,000	1,000,000	Eastport, Me	R. Vose, 54 William, N. Y.
Erie	40,000	4,000,000	Orange co., N. Y.	Ogden Gaul, 25 Pine, N. Y.
Hampton	100,000	500,000	Hampshire co., Mass	C. W. Bryant, Boston.
Jefferson				65 Wall, N. Y.
King's Hill	6,000	50,000		W. L. Haskin, 180 B'way, N. Y.
Lake Superior	500,000	1,000,000	Secs. 5 & 36 T., 49 & 50 R., 28 & 29 Marquette co, Mich.	C. L. Mather, N. Y.
Lancaster	50,000	250,000	Lancaster co., Pa	J. R. Sibley, 35 Pine, N. Y.
Macomb	10,000	550,000	Macomb T. St. Law. co., N. Y.	C. E. Scofield, 42 Cedar, N. Y
Maine	50,000	500,000	Eastport, Me	A. L. Butler, 54 William, N. Y.
Mineral Point	100,000	500,000	St. Lawrence co., N. Y.	H. W. Warren, 60 City Ex., B stn.
Morgan	100,000	500,000		W. Williams, 42 Cedar, N. Y.
Manhan				40 B'way, N. Y
Mount Hope	80,000	200,000	Mt. Hope, Orange co., N. Y.	W. Williams, 24 Pine, N. Y.
New Hampshire	100,000	500,000	New Hampshire	W. A. Farrar, 71 B'way, N. Y
N. Y. & Boston		1,000,000	Chester co., Pa	S. M. Cockein, 22 William, N. Y.
Oswegatchie				24 Pine, N. Y.
Owens Lake	50,000	250,000		C. W. Bond, 78 Cedar, N. Y.
Phœnix	50,000	250,000	Columbia Co., N. Y.	G. W. Butler, 54 William, N. Y.
Placentia Bay	200,000	1,000,000	Newfoundland	J. Simpkins, 29 Wall, N. Y.
Ramsay	20,000	500,000	Township Ramsay, C. W.	C. W. Bryant, Boston.
Rochester	200,000	500,000		J. A. Ferguson, 8 Wall, N. Y
Rossie				24 Pine, N. Y.
Rosa Clara	100,000	1,000,000		H. Lathrop, 25 Nassau, N. Y.
St. Clair	100,000	1,000,000		H. B. Hawkins, 25 Nassau, N. Y
St. Joseph	100,000	1,000,000	St. Francis Co., Missouri	Jas. R. Knapp, 6 Broad, N. Y.
Shawangunk	100,000	500,000	Mt. Hope, Orange co., N. Y.	E. P. Ackerman, 48 Pine, N. Y
Sussex	25,000	625,000	Sparta Town, Sus'x co., N. J.	F. H. Stow, 53 Cedar, N. Y.
Walkill			Orange co., N. Y.	W. A. Scott, 11 Wall, N. Y.
Warren			Warren, Gratton co., N. H.	J. S. Christie, 100 B'way, N Y
White Mountain			New Hampshire	111 B'way, N. Y.

SILVER.

COMPANY.	SHARES.	STOCKS.	LOCATION OF PROPERTY.	SEC'Y AND PLACE OF BUSINESS.
Amazon	25,000	$250,000	Nevada	W. L. Louther, 134 So. 3d, Phil.
Argentine	50,000	250,000	Argentine Dist., Colorado	D. L. Demmon, 134 State, Boston
Arizona	100,000	10,000,000	22 m W of Tubac, Arizona	J. B. Randol, 25 Nassau, N. Y
Astor	200,000	1,000,000	On Comstock Lode, Nev	J. Chapman, 71 Broadway, N. Y.
Atlantic & Pac.	50,00	1,000,000	Humboldt T, Hum't Co, Nev.	J. N. Sewall, 8 Broad st., N. Y.
Big Smoky	20,00	600,000	Smk'y Hill, Lander Co. Nev.	71 B'way.
Black Eagle	7 00	350,000	Carson, Owyhee co., Idaho	O. D. Gardner, 40 Maiden lane.
Bullion	200,00	1,000,000	Bannock, Montana	55 Liberty street.
Bush	50 00	500,000	Austin City, Nevada	176 Chambers st., N. Y.
Combination	50 000	5,000,000	Nevada	J. W. Stoute, Jr., 155 B'way, N.Y
Colorado Con			Cedar Hill Nevada	New York.
Columbia	30,000	3,000,000	Austin City, Nevada	J. E. Smith, 10 Pine street, N. Y.
Coun. & Nevada	120,000	1,250,000	Averill, Churchill Co. Nev	49 Liberty street, N. Y.
Commonwealth	200,000	2,000,000	Gold Hill, Nevada	78 B'way. N. Y.
Cosmos	10,000		Owyhee Co, Idaho	137 Broadway, N. Y.
Del Norte & S'br			Lower California	New York.
Durango	5,000	500,000		W. R. Garrison, 73 W'm st., N Y.
East Bannack	100,000	200,000	Bannock City, Montano	J. Callender, 49 Ex. P., N. Y.
Empire G. & S.	100,000	10,000,000	Bodie Bluff, Mono	H. R. Gates, 191 Broad'y, N. Y.
Empire and Silver State	20,000	2,000,000	Reese River Dist., Nevada	57 B'way, New York.
Eldorado	500,000	2,500,000	San A 9 m s of Austin, Nev	208 South Fourth street, Phila.
Essex & Diadem	125,000	2,500,000	Sierra dis, Humboldt C. Nev	A. R. Wetmore, 81 Vesey st, N.Y.
Franklin			Nevada	Philadelphia.
Gem	200,000	1,250,000		H. K. Gates, 191 B'way, N. Y.
Globe	100,000	500,000	Austin, Nevada	J. W. Brazier, 26 Pine, N. Y.
Good Hope	20,000	1,000,000	40 m S of Austin, Nevada	80 Broadway, N. Y.
Huron			Montano	New York.
Incas	300,000	300,000	Summit co., Colorado	J. P. Whitney, 19 Lindall, Bost.
Knickerb'r and Nevada	20,000	2,000,000	Union Dis, Nye Co, Nev	H. R. Shotwell, 70 Cedar, N. Y.
Lander Hill			Nevada	74 B'way. New York.
Lincoln		1,000,000	Owyhee Co, Idaho	80 Broadway, N. Y.
Lw'r California	40,000	2,000,000	North Part of Lower Cal	55 William street, N. Y.
Madison	30,000	3,000,000	Nevada	W. W. Perkins, 71 Bd'way, N. Y.
Macedon			Nevada	Philadelphia.
Manhattan			Nevada	57 B'way, New York.
Merchants	30,000	600,000	Alturus Co. Idaho	157 Broadway, N. Y.
Metropolitan	15,000	1,500,000	Austin City, Nevada	158 Broadway, N. Y.
Morning Star	5,000	5,000,000	Owyhee County, Idaho	137 Broadway, N. Y.
Mount Vernon	500,000	5,000,000	Mount Vernon & Mammoth District, Nevada	New York.
Mount Vista	50,000	500,000		J. Chapman, 71 Bway, New York.
National	15,000	1,500,000	Owyhee Co, Idaho	115 Broadway, N. Y.
Nevada	100,000	300,000	Mountain Wells, D. Ch. co. Nev	323 Walnut street, Phila.
Nevada	20,000	1,200,000	Nevada	E. L. Bolles, 74 B'way, N. Y.
New Y'k & Ione	20,000	2,000,000	Ione City, Nye Co., Nev	71 Broadway, N. Y.
New York	1,500	1,500,000	Austin, Nevada	S. R. Hutchinson, 80 B'way, N.Y.
New York City	50,000	5,000,000	Gold Can Dist. Lander Co. N.	10 Pine street. New York.
New Y'k Dis'ct	50,000	5,000,000	80 m f'm Austin, N. Y. Dis. Nevada	S. A. Hopkins, 71 Broadway, N Y
New Y'k & Nev	10,000	1,000,000	Nevada	J. J. Osborn, 30 Pine street, N. Y
N. Y. & Owyhee		1,000,000	Owyhee Co. Idaho	6 Pine street, New York.
N.Y. & Oro Fino	10,000	1,000,000	do. do.	137 Broadway, New York.
N. Y. and Silver Peak	20,000	2,000,000	Nye County, Nevada	R. C. Root, 74 Broadway, N. Y.
N Y. & Santa Fe			Nevada	New York.
N. Y. & Washoe			Nevada	New York.
North Am. M'g			Nevada	Philadelphia.
Ocean Transit		1,500,000	Lower California, Mexico	24 Pine, N. Y.
Ophir			On Comstock Lode, Nev	
Pah Ranagat Cl.	50,000	5,000,000	Nevada	26 Pine, N. Y.
People's	100,000	500,000	Alpine & Sierra Counties	8 Pine street. New York.
Phœnix	200,000	2,000,000		48 East 26th street, New York.
Picacho	50,000	2,000,000	Arizona	T. H. Perkins, New York.
Pine Mount'n	30,000	3,000,000	Pine Mount'n Dist. Nev	F. K. McCulley, 100 Bd'way, N. Y.
Pioneer & Inskip	10,000	1,000,000	Buena Vista Dis., Austin, Nev	D. H Temple, 8 Pine street, N.Y.
Prescott	50,000	2,500,000	Arizona	T. H. Perkins, New York.
Presidential	125,000	2,500,000	Austin, Nevada	Wm. Lemmon, 17 Broad, N. Y.
Republic	15,000	1,500,000	Amador, D Lander Co, Nev	67 Ex. Place, New York.
Revenue Exten	50,000	500,000	Lander County, Nevada	W. L. Kite, 142 South 4th, Phila.
Rosario & Carmo	5,244	1,480,000	Sinaloa, Mexico	San Francisco.
San Antonio	60,000	3,000,000	Arizona	C. Lamson, 21 Nassau st., N. Y.
Seminole	7,000	1,500,000	Unionv., Humboldt Co., Nev.	L. G. Wilkin, 119 B'way, N. Y.
Silas Wright	60,000	600,000	Amador, D Lander Co, Nev.	18 Wall street, New York.
Silver Hill	40,000	1,000,000	Nevada	J. C. Hitchcock, 62 B'dway, N.Y.
Silver Series		1,000,000	Lander Co., Nevada	W. B. Rogers, 117 B'way, N. Y.
South Boise, T Co	200,000	2,000,000	Alturas Co., Idaho	A. M. Palmer, 19 Broad st., N. Y
Star Hill	20,000	1,000,000	Nevada	155 B'way.
St'h Cl' Crk			Colorado	Canastota, New York.
Stephenson	500,000	1,000,000	18 m E of Ft. Fillmore	A. S. Kellogg 22 Pine, New York.
Steptoe	20,000	2,000,000	Gold Can. Lander Co. Nev	10 Pine. New York.
Sterling City		1,200,000		New York.
Tarshish	12,000	1,200,000	Toryabee Range, Un. D., Nev	H. S. M'Collum, 78 B'way, N Y
Tempest	200,000	1,000,000		L. Bangs, 17 Nassau, N. Y.
Trumfo			San Antonio, Lo'wr Cal	San Francisco.
Toiyabee	50,000	5,000,000	Pine W'd, Mo'tn Dis, Nev	J. M. Brown, 157 B'way, N. Y
Union & El D'o	100,000	1,000,000	Mogul Silver Mo'tn	40 Park Row.
Upper Missouri		100,000	Montana	107 Broadway.
Vedder	21,000	2,100,000	Amador Dist., Nevada	L. G. Bingham, 80 B'way, N.Y.
Wamba Yuma	600,000	6,000,000	Arizona	35 William street. New York.
War Eagle	50,000	200,000	Owyhee Co., Idaho	G. M. Eldridge, 144 S. 4th, Pl.
Washington	22,500	2,250,000	Austin, Nevada	S. R. Hutchinson, 80 B'way, N.Y
White Mountain			New Hampshire	111 Broadway, New York.

COPPER.

COMPANY.	SHARES.	CAPITAL.	SITUATION OF PROPERTY	SEC'Y., AND PLACE OF BUSINESS.
Astor,	20,000	500,000	Michigan,	Pittsburgh.
Adventure,	20,000	1,000,000	Parts of Sections 30, 36, T. 51, N Range 38 W,	W. H. Smith, 51 Ex. Pl, N. Y.
Gna,	20,000	500,000	1226 A in Secs. 6, 7, 18, T. 58, N R 28, W Keweenaw co. Mich.	B. A. Hoopes, 324 Walnut St., Phil.
Alb'ny & Bost'n,	20,000	1,000,000	Secs 7, 8, 9, 10, 11, T. 55, R. 33	Fred. Beck, 43 City Ex., Boston.
Anita,	20,000	500,000	Del Norte co., California,	8 Wall St., N. Y.
Algomah,	20,000	500,000	W½ S. 30, T. 51, R. 37,	L. W. Clark, Boston.
Allouez,	20,000	500,000	Town 57, R. 32, Sec. 31,	Horatio Bigelow, Boston.
Amy gil'yd'l.,	20,000	500,000	E½ Secs. 16, 21, T. 58, R. 30, NW¼ Sec. 5, T. 57, R. 31, 160 A,	F. H. Womrath, 324 Walnut St., Philadelphia.
Arcadian,	20,000	500,000	NW¼ Sec. 20, T. 57, R. 33, 160 A,	C. P. Dixon, 48 Pine St. N. Y.
Atlas,	20,000	500,000	NE¼ of E½ & NW¼ of NW¼ Sec. 31, T. 57, R. 31,	L. W. Clark, Boston.
Aztec,	20,000	500,000	W½ Sec 31, T. 51, N. of R. 37,	L. W. Clark, Boston.
Bay State,	20,000	500,000	SW¼ Sec. 29, T. 58, R. 31,	L. W. Clark, Boston.
Bohemian,	20,000	500,000	E½ Sec. 31, NW¼ Sec. 32, T. 51, R. 37, W,	R. H. Rickard, 21 Nassau St., N.Y.
Boston,	20,000	500,000	Michigan,	H. W. Warren, 60 City Ex., B'st'n.
Canada,	20,000	500,000	Brome co., Canada East,	H. P. Mount, 3 Hanover St., N. Y.
Calumet,	20,000	500,000	Michigan,	Boston.
Concord,	20,000	500,000	Michigan.	Boston.
Carp Lake, M.,	20,000	500,000	T. 51, N. R. 43, W. S½ of N½ of N. Sec. 14, and E¼ Sec. 23, and NE¼ Sec. 23, 240 A.	W. H. Abel, 70 Wall St., N. Y.
Cascade, M.	20,000	500,000	SW¼ Sec. 9, T. 49, N. R. 39, W, in Ontonagon co., Mich.,	G. F. Riley, 35 Wall St., N. Y.
Copper Creek,	1,000	$100,000	Missouri,	H. M. Thompson, Missouri, Mo.
Copper Falls,	20,000	500,000	Sec. 14, T. 58, N. R. 31, W, Keewenah Point,	97 State. Boston.
Copper Harbor,	20,000	500,000	S½ Sec. 10, T. 58, R. 28, 320 A. Keewenah co.,	Fred. Beck, 43 City Ex., Boston.
Copper Creek,	20,000	500,000	Douglas co., Wisconsin,	T. B. Lawson, 71 Broadway, N. Y.
Central,	20,000	500,000	E¼ Sec. 23, T. 58, N. R. 31, W,	J. Stanton, Jr., 25 Nassau, N. Y.
Cornwall,			Strafford, Orange co., Vt.,	D. H. Whitney, 17 State St., B'n.
Continental,	200,000	500,000	Martinsburg, New York,	J. Sickles, 50 Ex. Pl., N. Y.
Corinth,	20,000	500,000	Corinth, Orange co., Vermont.	W. A. Cleveland, 191 B'way, N.Y.
Copper Hill,			Wisconsin,	Boston.
Dacotah,	20,000	500,000	Sec. 35, T. 55, R. 34, Portage Lake,	J. M. Cooper, Milk St., Boston.
Delaware,	20,000	500,000		S. M. May, 326 Walnut St., B'st'n.
Dorchester,	20,000	500,000	Michigan,	31 and 32 City Ex., Boston.
Douglas,	20,000	500,000	E½ Sec. 30, T. 55, R. 3,	S. J. Edwards, William St., N. Y.
Dudley,				H. Bigelow 43. City Ex., Boston.
Eagle River,	20,000	500,000	T. 58, R. 31, Secs. 28, 29, 33, 34,	A. Lamson, 70 State St., Boston.
Ely,	00,000	500,000	325 A., Richmond, Canada East,	Ernest Sacchi, 82 B'way, N. Y.
Empire,	20,000	500,000	1798 A., Secs. 1, 2, 11, 12, T. 58, N. R. 28, W. K'w'n co., Mn.,	J. S. McMullin, 423 Walnut, Phil.
Eureka,	20,000	500,000	W½ Sec. 2, T. 49, N. R. 41, W. Ontonagon co.,	H. Shirley, 137 B'way, N. Y.
Evergreen Bluff	20,000	500,000	NE¼ Sec. 6, T. 50, R. 33,	F. W. Capen, 44 Ex. Pl., N. Y.
Edwards'Copper	20,000	500,000	Michigan,	H. K. Thomas, 12 Wall, N. Y.
Eagle Harbor,	20,000	500,000	Michigan,	51 Ex. Place. New York.
Frue,	20,000	500,000	Michigan,	A. S. Kellogg, 22 Pine st., N. Y
Flint Steel R.,	20,000	500,000	Sec. 11, 12, T. 59, N. R. 39, W,	F. K. McCully, 157 B'way, N.Y.
Forest City,	20,000	500,000	320 A. NE¼ Sec. 36, and SE¼ Sec. 25, T. 51, R. 43,	J. F. Paul, 19 Phœnix Building, Boston.
Franklin,	20,000	500,000	¼ Sec. 24, T. 55, N. R. 31 W.,	C. Emery, 26 Kilby St., Boston.
Franconia,	60,000	300,000	New Hampshire,	J Hauna, 162 Fulton St., N. Y.
French Creek,	00,000	600,000	Chester co., Pennsylvania,	R. Roberts, 19 Nassau St., N. Y.
Garden City,	20,000	500,000	SW¼ Sec. 60, N. W. Sec. 19, T. 58, N. R. 31 W.,	R. H. Howe, Chicago.
Girard,	20,000	500,000	600 A. Sec. 15, T. 58, N. R. 28, W. Keweenaw co., Mich.,	B. A. Hoopes, 324 Walnut, Phil.
Gr'd Portage,	20,000	500,000	SW¼ Sec. 36, R. 34, W,	A. S. Kellogg, 22 Pine St., N. Y.
Great Western,	20,000	500,000	SE¼ Sec. 30, & SW¼ Sec. 29, T. 21, K. 320 A., Ontonagon	J. M. Cooper, 24 Citty Ex., B'st'n.
Hamilton,	20,000	500,000	SE¼ Sec. 35, S½ Sec. 36, T. 50, R. 41, SW¼ Sec. 21, R. 20, 14¼ A.,	J. B. Townsend, 44 Exchange, N. Y.
Hancock,	20,000	500,000	SW¼ Sec. 26, Tract of Sec. 25, T. 5, R. 34, W.,	Fred. Beck, 43 City Ex., Boston.
Hanover,	20,000	500,000	Michigan,	do. do. do. do.
Hartford,	20,000	500,000	240 A. E½ & SE¼ Sec. 32, SW¼ & W½ Sec. 33, T. 50, R. 40, W,	T. M. Tyng, 61 Cedar St., Boston.
Henwood,			Michigan,	57 Broadway, N. Y.
Hope,	20,000	500,000	240 acres in T 57, R 32, Kw co.	19 Nassau St., New York.
Humboldt,	20,000	500,000	Sec. 21, T. 58, R, 31, W,	Hor. Bigelow, 43 City Ex., B'st'n.
Huron,	20,000	500,000	Sec. 2, T. 54, R. 34, W,	Hor. Bigelow, 43 City Ex., B'st'n.
Hilton,	20,000	500,000	Michigan,	W. H. Smith, 51 Ex. Place, N. Y.
Indiana Copper,	20,000	500,000	Michigan.	25 Nassau st.
Isle Royale,	20,000	1,000,000	NW¼ Sec. 1, T. 54, R. 34, W,	F. W. Chapen, 33 Ex. Pl., Boston.
Keweenaw,	20,000	500,000	Michigan,	F. W. Chapen, 44 Ex. Pl., Boston.
Knowlton,	20,000	500,000	SE¼ Sec. 1, W½ of SW¼ Sec. 1, and other lands,	44 Ex. Pl., N. Y.
Lafayette,	20,000	500,000	Secs. 25, 30, 36, T. 51, N. R. 43, and 44, W, Ontonagon,	P. C. Blancan, 35 Wall St., N. Y.
Lyster,	200,000	$400,000	Township Nelson, Canada East,	H. W. Nelson, 24 City Ex., B'st'n
Lower California	40,000	2,000,000	N. part of Lower California,	55 William St., N. Y.
Madison,	20,000	500,000	Part sec. 18, 19 entire, 30, 31.	Fred. Beck, 43 City Ex., B'st'n.
Merryweather,	20,000	500,000	Secs. 9, 19, T. 48, N. R. 4, W,	J. T. Waters, New York.
Mandan,	20,000	500,000	680 A. Secs. 8, 17, 19, 30, T. 58, N. R. 29, W., Keweenaw co., Min.,	B. A. Hoopes, 324 Walnut, Phil
Manhattan,	20,000	500,000	W½ Sec. 11, NW¼ Sec. 14, T. T. 58, N. R. 32, W, 360 A.	J. W. Davies, 21 Nassau St., N Y
Mendotta,	100,000	500,000		M. Taylor, 30 Wall St., N. Y.
Mass. M. Co.,	20,000	500,000	SW¼ Sec. 7, T. 50, N.R. 38, W,	J. M. Cooper, Pittsburgh.
Mesnard,	20,000	500,000	NE¼ Sec. 24, T. 55, R. 34, Calaveras co.,	L. Burr, 12 Phœnix Bigs, Boston.
Molones & Stan.,				606 Mont St., San Francisco
Minnesota,	20,000	1,000,000	Sec. 15, T. 50, N. R. 39, W,	S. M. Pond, 12 Pine St., N. Y.
Maryland,			Maryland,	Baltimore.
Medora,	20,000	250,000	Michigan,	Pittsburgh.
Michigan,	20 000	300,000	Michigan,	W. H. Smith, 51 Ex. Place, N.Y.
Merrimac,	20,000	500,000	NW¼ Sec. 34, T. 51, R. 38, W, Ontonagon,	J. M. Mills, 284 Pearl St., N. Y
National,	20,000	300,000	Sec. 16, T. 50, R. 39, W, 1,988 A	J. M. Cooper, Pittsburgh.
Nequakett,	20,000	500,000	Sec. 26, T. 51, R. 43,	
New Burra,			Baltimore,	R. Roberts, 19 Nassau St., N. Y.
New Jersey Con.	100,000	1,000,000	New Jersey.	W. Bowes, 68 Wall St., N. Y.
N. Y. & Passaic,	100,000		Harrison, Bergen c.,	T. H. Belt, Jr., 23 William St., N.Y
New Devon,				T. H. Belt, Jo, do. do.
North Western,	20,000	300,000	W½ Secs. 24, 25, 26, E½ Sec. 36, 35, T. 58, N.R. 31,	17 William St., N. Y.
North Cliff,	20,000	200,000	Michigan,	J. M. Cooper, Boston and Detroit.
Norwich,	20,000	500,000	Secs. 11, 12, T. 40, N.R. 39, W. and other lands, 1,300 A.,	Pittsburgh,
Ogima,	20,000	500,000	NW¼ Sec. 6, T. 50, N.R. 33, W.	P. C. Blancan, 35 Wall St., N. Y.
Ontonagon,	20,000	500,000	631 A. Secs. 20, 21, 28, T. 50, N. R. 39, W. Rockland,	G. E. Lofflingwell, 7 Pine, N. Y.
				G. Hart, 11 Pine Street. N. Y.
Otisville,	100,000	500,000	Otisville, Orange co., N. Y.,	C. Windsor, 69 Wall St., N. Y.
Penn. Manuf'g.,	20,000	1,000,000	4,320 A. Secs. 13, 14, 15, 24	
Petherick,	20,000	500,000	Michigan,	Boston,
Phenix,	20,000	500,000	Michigan, ½ Secs. 10, 11, 12, 23, 25, T. 58, N. R. 30, W.	Boston, S. M. Day, 326 Walnut St., Phil.
Pewabic,	20,000	500,000	W½ Sec. 25, T. 55, N.R. 34, W.	C. Emery, 39 State, Boston.
Pitts. & Boston,	20,000	150,000	Ts. 58, 57, N. R. 31, 32, W. 12,495 A.	H. A. Johnston, Pittsburgh.
Pontiac,	20,000	500,000	SE¼ Sec. 13, T. 55, N. R. 31, W	C. Emery, Kilbey St., Boston.
Prescott,	100,000	1,000,000	Central Arizona,	69 Broadway, N. Y.
Providence,	20,000	500,000	240 A. in Keweenah co., NW¼ Sec. 10, W½ NW¼ Sec. 10, T. 57, R. 32, W.	J. W. Davis, 21 Nassau St., N. Y.
Phila. & Boston,	20,000	500,000	640 A. Sec. 14, T. 58, N. R. 28, W. Keweenaw co., Mich.	J. S. McMullin, 423 Walnut St., Boston.
Quincy,	20,000	500,000	Sec. 26, T. 54, N. R. 34, W,	W. H. Smith, 51 Ex. Pl., N. Y.
Republic,	8,000	200,000		H. Baldwin, 70 Wall St., N. Y.
Reliance,	20,000	500,000	Secs. 21, 22, 27, T. 58, N. R. 28, W, 10,785 A.	H. K. Thomas, 11 Wall St., N. Y
Rochester,	200,000	500,000		J. A. Ferguson, 8 Wall St., N. Y
Rhode Island,	20,000	500,000	Michigan.	New York.
Ridge,	20,000	500,000	Sec. 35, T. 51, R. 38, W,	51 Exchange Place, N. Y.
Rockland,	20,000	500,000	Sec. 11, T. 50, R. 39,	S. J. W. Barry, 71 B'way, N.Y.
Resolute,	20,000	500,000	1,120 A. Secs. 7, 18, 19, T. 58, N. R. 29, W. Keweenaw co., Mich,	
St. Mary,	20,000	500,000		F. Beck, 45 City Ex., Boston.
St. Margaret,	200,000	1,000,000	Canada,	E. B. Sutton, 43 Pine, N.Y.
Saint Clair,	20,000	500,000	Michigan,	Boston,
Sharon,	20,000	500,000	Ontonagon co., Mich,	P. C. Blancan, 35 Wall St., N. Y.
Sheldon & Col., South Side,	20,000	500,000	SE¼ Sec. 36, T. 55, R. 34, W, SE¼ Sec. 34, T. 55, R. 34, W,	S. J. Edwards, 22 W'm. St., N. Y
Societe Fran'se,	10,000		T. 58, 59, N. R. 28, 30 W,	H. W. Nelson, Boston. Copper Harbor.
Superior,	20,000	500,000	W¼ Sec. 14, T. 59, N.R. 39, W.	S. J. W. Barry, 12 Pine St., N. Y
Toltec Consol.,	20,000	500,000	Secs. 25, 26, R. 50, R. 36, Wisconsin,	H. W. Nelson, Boston. 17 William St., N. Y.
Ural,				
Vulcan,	20,000	500,000	1,120 A. Secs. 7, 17, 18, T. 58, N.R. 27, W. Keweenaw co.,	F. K. Womrath, 324 Walnut, Phil.
Victoria,	20,000	500,000	Secs. 29, 29, 30, 34, 34, T. 50, R. 39, and other lands,	L. W. Clarke, Boston.
W. Minnesota,	20,000	500,000	Secs. 17, 18, 19, T. 50, N. R. 39, W.	C. T. Howard, Boston.
Wickopee,	100,000	500,000	Massachusetts,	G. A. Sneden, 12 PineSt., N. Y
Vermont,	100,000	500,000	W. Fairlee, Orange co., Vt.,	191 B'way, N. Y.
Waula Yuma,	600,000	6,000,000	Arizona,	35 William St., N. Y
Winthrop,	20,000	500,000	Michigan,	Boston

S, means section; T, to wnsip, R range.

AMERICAN
Journal of Mining.
[ILLUSTRATED.]

GEORGE FRANCIS DAWSON,
EDITOR

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NEW YORK, SATURDAY, DECEMBER 8.

Contents of this Number.

EDITORIALS.—State Papers on American Minerals, Miners and Mining, with a word or two about Statistical Agent Ross Browne.
ORIGINAL PAPERS.—Mineralogical Sketches of the Counties in Scotland, No. 5. by H. Dussance—The Electro-Positive Metals, No 6. by Jos. Hirsh, Ph. Dr.—The Noble Metals, by Francis E. Engelhardt, Ph. Dr.
ILLUSTRATED MACHINERY.—Improved Steam Boilers.
SCIENTIFIC MEETINGS.
MINING SUMMARY.—News from Nevada, Colorado, Montana, Pennsylvania, Oregon, California, Michigan, Idaho, Wisconsin, Minnesota, West Virginia, Washington, British Columbia.
MISCELLANEOUS—Annual American Mint Coinage—Mining Machinery—Mr. Richardson's Petroleum Furnace—Great Mining Enterprise in California—The Richest Copper Mine of Lake Superior.
POETRY.—Toil and Song
SPECIAL SCIENTIFIC BREVITIES.
MINERAL AND OTHER OX-DITS.
ALL SORTS.
MINING COMPANY MEETINGS—DIVIDENDS.
PATENT CLAIMS.—Important to Mill Men, Miners, Metallurgists, Oil Men, etc.
TABULAR MATTER.—Gold, Copper, Lead and Silver Mining Companies; Names, No. of Shares, Capital Stock, Situation of Mine, Name of Secretary and Place of Business.
MARKET REVIEW.—Mining and Petroleum Stocks, Finances, Stocks, Metals, etc.
THE COAL TRADE.—Quotations, Shipments, Freights, Cargo Rates, Weekly Coal Trade Circular.
FOREIGN MARKET REVIEW—Metals, etc.
NEVADA STOCKS.—Latest advices by Telegraph.
NEW YORK METAL MARKET.

STATE PAPERS ON AMERICAN MINERALS, MINES AND MINING, WITH A WORD OR TWO ABOUT STATISTICAL AGENT ROSS BROWNE.

In reading the President's annual message delivered to Congress last Monday, we were astonished to find not one word of allusion to the vast stream of wealth rolling into the lap of commerce from the mines of nearly every State and Territory of the Union. Agriculture receives but a six-line notice, and mining none at all! Yet upon those two industries how much more depends than upon the workings of the Post-Office Department, to which half a column is devoted! The questions of reconstruction and our Foreign Relations seem to have crowded nearly every other topic into the smallest proportions—and this was in some degree to be anticipated—but that mining should be so slighted as not even to be mentioned, is rather too much of a good thing. We therefore protest that the President—whether he be Andrew Johnson "or any other man"—give mining its fair share of attention in future annual messages. Mr. Secretary of the Treasury, McCulloch, does not treat the mining interests much better. To be sure he incidentally gives us the interesting fact that:

> Between the year 1848, when gold was first discovered in California, and the 1st of July, 1866, the product of the gold and silver mines of the United States was about $1,100,000,000, nearly all of which has gone into the world's general stock, and it is not probable that the amount of gold and silver now in the United States is very much larger than it was eighteen years ago.

But that is about all. In his previous annual statement he had a great deal to say in favor of the policy of selling our mineral lands, but for some reason he does not in this say one word as to how something approaching that policy, now legalized by act of Congress, has worked—whether well or ill. He draws attention to Mr. John Jay Knox's report on the San Francisco mint and other matters, particularly "to that part of it which refers to assay offices, and their inutility in remote districts," and continues:

> If, as he concludes, the business of assaying can, not only without detriment, but with positive advantage to the mining interest, be left entirely to private enterprise, where there are no established mints, the Government should be disconnected from it in such districts without delay.

We rather imagine some of our Western S'ates and Territories will kick against that recommendation of Mr. Knox's, although no one can object to Mr. Third-person-singular-number-nominative-case McCulloch's sapient and non-committal "*if*." He also mentions that the new Statistical Bureau, under Director Alexander Delmar, has within its two months of existence progressed well. But all "The Secretary" says directly on the subject of mines is that J. Ross Browne and James W. Taylor have been appointed Commissioners—the one West, the other East of the Rocky Mountains—to collect "*reliable*" statistical information concerning our gold and silver mines—to which he adds:

> Their preliminary reports have not yet been received, but it is expected that they will be in season to be laid before Congress early in the session. The well-known energy of these gentlemen, and their familiarity with the subject of mines and mining, leads the Secretary to expect that their investigations will be thorough, and their full reports interesting and valuable.

What Mr. Taylor has done in his allotted portion of the United States we cannot say, but it is safe to assume that from the date of his appointment, Sept. 12th, he would *hardly* have time to make much of a report upon the thirty odd States and Territories falling under his supervision. As to Mr. Browne, we learn by telegram from San Francisco, Dec. 4th, that he has already "transmitted to the Secretary of the Treasury an elaborate report on the mineral resources in the States and Territories west of the Rocky Mountains;" and that "it is pronounced by competent judges the most complete digest of statistics and geological information respecting our mineral regions ever yet compiled for public use." We trust that Mr. Browne did not have the bad taste to write that dispatch himself, but it is very evident from another paragraph of said dispatch, that if *he* did'nt write it, some particular friend of his *did*—some friend who perhaps knows something about Ross Browne's affairs; for although the telegraper does not mention that Mr. B. was recently in Washington in the interest of the California Wine Growers; nor that Secretary McC. likes California wine, wit, and poetry; nor that Mr. B. presented divers bottles of said wine to said Secretary McC.; nor that Secretary McC. presented Mr. B. with the statistical appointment aforesaid; nor that after reaching California Mr. B. having so much time on his hands (about four months) in which to collect "reliable" mining statistics—has recently been presiding over the deliberations of said California Wine Growers, nor that he has been engaged in other literary labors than those of making statistical reports; yet he does say that in the event of our acquiring certain Mexican States, and "Lower California," they may be "regarded as magnificent fields for American enterprise," and adds this:

> Mr. Brown has organized a scientific party, composed of members of the State Geological Survey, to make a geological and topographical reconnoissance of Lower California for the New York Land Company, whose grant of land has recently been confirmed by the Mexican Government. Considerable American capital has been invested in that region, and it is important that its resources should be known. Mr. Brown expects to leave by the next steamer for La Paz.

Truly the telegrapher must be very intimate with Browne; doubtless thinks a great deal of him; has his interest and the interest of his employers—the Land Company very much at heart—and indeed, from the numberless editorial and telegraphic paragraphs constantly appearing in the New York dailies, concerning Lower California and this company, one would suppose that the New York public are also much interested in its success, when in reality they do not care a "rap" for the whole concern, as it is only too plain that the matter is thus constantly paraded and agitated *for an object*. But leaving the operations of the company for the present, it does seem to us that Mr. Browne has too many irons in the fire. It is written that "No man can serve two masters," and Mr. B., although a talented writer, and doubtless an appreciative reader of the JOURNAL OF MINING—for he is one of our subscribers—is not more than a man. How, then, is it possible for him, with all his recognized ability and energy, to serve the Wine Growers of California, the Lower California (Mexico) Land Company of New York, and good Uncle Samuel all at the same time, is more than we can determine. But we will leave him on his way to La Paz, Mexico, and come back to the Departmental reports. Secretary Browning, of the Interior Department, devotes the following space in his report to mineral lands:

> Attention has been repeatedly invited by this Department to the immense value of the deposits of precious metals within our territorial limits. The mineral lands on the Pacific slope belong to the Government, but it has not provided for the disposal of them, or for the development of the treasures which they contain, in the absence of legislation by Congress, and with its tacit consent, these mines have been worked by individuals, vast expenditures made, and a species of possessory right acquired which has been recognized by State laws, and maintained and vindicated by State tribunals. The act of Feb. 27, 1865, declares that no action in the Courts of the United States for the recovery of any mining title, or for damages thereto, shall be effected by the fact that the paramount title to the land on which such mines are, is in the United States, and the Supreme Court has held that mining interests, apart from the fee-simple rights in the soil by patent, existed before that act, with the implied sanction of the Federal Government. The exploration and working of these mines have largely contributed to the national wealth, and our legislation should, I submit, be controlled to some extent by existing rights and interests, which are the legitimate results of our policy of inaction. The wisdom of Congress can devise measures which, by placing this vast interest under the control of positive law, will render it tributary in a greater degree to the public prosperity.

The Secretary has evidently had a long nap. He does not seem to be aware that at its last sitting, Congress passed a mining law (which we published at the time), by which the public domain is given up to the researches of mine prospectors; claims are allowed to be located upon it, in accordance with prevailing local regulations, and after payment to the Government of costs of survey and $5 per acre, a patent for the same is to be issued to the locator. Under this law, which seems to work much better than we anticipated "existing rights and interests" *are* protected. Still, we shall be the last one to complain, because one of the first to propose it, if Congress can devise a good law that shall more thoroughly embrace the whole mining system of our country. But leaving the question of Mine legislation for a time, and turning from Secretary Browning to the Report of the General Land Commissioner, we find the following very interesting review of our mineral and metalliferous deposits:

> In pursuance of the Act of July 1, 1864, "for the disposal of coal lands and town property in the public domain," surveyors general and the registers and receivers of the different land districts were instructed

to institute proper inquiries as to the mineral character of the lands in their respective districts, to ascertain what tracts come within the meaning of the terms "coal beds" or "coal fields" and to report results. It is found that the information called for as to the quantities of land embracing coal beds or coal fields in the respective land districts, can be but imperfectly furnished through the instrumentality of officers whose time is absorbed with other duties; yet from reports received and other trustworthy sources, it is ascertained that coal is distributed in the public domain in large quantities. In Michigan, Ohio, Indiana, Illinois, Missouri, Iowa and Alabama its existence has long been known, and in many places it has been extensively mined for commercial purposes. In Arkansas, Louisiana, Kansas and California, numerous deposits of a superior quality have been discovered, while in Nevada and Oregon, and the Territories of Washington, Idaho, Montana, Utah, Colorado, Dakota, New Mexico and Nebraska, coal traces have been found within the last few years, indicating an abundant distribution. The coal field of Iowa and Missouri, passing through the eastern portions of Nebraska and Kansas and the western part of Arkansas, extends diagonally through Texas and enters the Republic of Mexico. The western limit of this extensive field is reported to lie about the 97th degree of west longitude, where the limestone formation is succeeded by the red saliferous sandstone. East of this meridian, in the extensive limestone formation, the great mineral coal measures occur, covering large portions of the States of Iowa and Missouri on the west of the Mississippi, and Illinois, Indiana, Ohio and other States on the east of that river, and appearing in numerous traces in the regions bordering on the Nemaha, the Neosho, the Arkansas and Canadian rivers. Beyond the plains, along the base of the Rocky Mountains, and extending from the northern limits of New Mexico, through Colorado, and north of it to the Canada line, passing through Idaho, Oregon and Washington, are the tertiary coal measures of the United States, containing many varieties of brown coal, useful not only for the ordinary purposes of fuel, but much of it excellent for steam navigation purposes. Interspersed with this valuable deposit are most of the other useful minerals, upon the presence of which the wealth and prosperity of a nation measurably depend. The precious metals are deposited in three broad belts, stretching across the United States, one known as the "Appalachian Gold Field," traversing the older States of the Union in a line parallel with the Atlantic coast, and appearing in Virginia and North Carolina; the other as the "Rocky Mountain Gold Field," traversing all the more recently organized Territories of the United States, and the third as the "Sierra Nevada Gold Field," extending through the country bordering on the Pacific. Iron is at the same time the most generally distributed through the public land States, and it has been estimated that there is iron ore enough in Missouri alone to supply a million tons per annum of manufactured iron for the next two hundred years; while lead, tin and zinc are found in several of the States and Territories. Copper in immense quantities is found in the vicinity of the lakes east of the Mississippi, existing likewise in greater or lesser degree in the region extending from the Mississippi Valley to the Pacific. The precious metals exist chiefly in California, in Nevada, in North-eastern and South-western Oregon, in Washington Territory, in Idaho, Montana, Colorado, Southern Utah, New Mexico and Arizona, scattered over an estimated area of a million square miles, and now yielding an annual product in gold and silver, according to the best attainable estimate, of over $100,000,000—California alone having produced in the precious metals since 1848 over $1,000,000,000, while the developing mines of Nevada, Colorado, Idaho, Montana, New Mexico and Arizona, are making large annual additions to the American yield of gold and silver.

The Commissioner then speaks of the petroleum oil belt of California, but as he does not mention the great petroleum deposits of Pennsylvania, Ohio, Tennessee, West Virginia and elsewhere, and really says nothing new concerning the California deposits, we omit it. The most interesting point in the above extract is, with reference to the immense measures of coal underlying the land, and the fact that "the other useful minerals" are plentifully interspersed with it. But, taking the reports altogether, they are wofully deficient in thoroughness when treating of mining matters, owing, doubtless, in part to the absence of reliable statistical information on the subject. We hope that the mining statistics and information collected by Messrs. Taylor and Browne will prove reliable, for in that case there will no longer remain any excuse for the President and his Secretaries to so slight the mining interests as they have in the message and reports we have just glanced through.

DIVIDENDS.

Buck Mountain Coal Co., at Philadelphia, Pa., 5 per cent. on capital stock, free of State tax, payable on the 8th proximo. Lehigh Coal and Navigation Co., at Philadelphia, Pa., 5 per cent. free of National and State tax. Ocean Oil Co., at 147 South Fourth street Philadelphia, 2½ per cent. free of tax, on demand.

MEETINGS.

West Columbia Coal and Salt Co., at 137 Broadway, December 20, 12 M; Kanawha and Ohio Coal Company, at 40 Wall street, Dec. 10; South Shore Mining Co., at 34 Pine street, Dec. 11; N. Y. Mill and Mining Co., at 23 William street, Dec. 11; Frontenac Lead Mining Co., at 34 Pine street, this day; Montrose Gold Co. of Colorado, at 111 Broadway, Room 33, Dec. 18, 1 P. M.

ASSESSMENTS.

Eagle Harbor Copper Co., at 51 Exchange Place, $1 per share; Rockland Mining Co., at 71 Broadway, $1 per share, on or before Jan. 1st, '67; Superior Mining Co., 71 Broadway, 50 cents per share, on or before Jan. 1st, '67.

Scientific Meetings.

GERMAN POLYTECHNIC ASSOCIATION.

WEAVING CHAIRS—WHAT IS THE BEST SOLUTION FOR HARDENING STEEL?

At the last meeting of the German Polytechnic Association, Mr. Rochow in the chair.—Mr. J. Miller spoke at some length about his new weaving chairs, referring also to that of Hotchison and the older chairs in use. The subject elicited considerable controversy, as the new chair referred to was shown to possess many new features.

In answer to a question of Mr. Miller, what solution was most appropriate for hardening steel, without turning it black, Mr. Hirsh suggested a solution of green vitriol and sulphate of magnesia. Mr. Miller said that he had used green vitriol which had given him the best results in a series of experiments, but still not quite satisfactory ones.

The meeting then adjourned.

AMERICAN INSTITUTE—POLYTECHNIC BRANCH.

MILLERS' STEAMPIPES—FLEURY'S ROTARY DISINFECTING APPARATUS—BACON'S STEAM INDICATOR—DR. STEVENS AND PROF. GRAHAM ON THE NEW THEORY OF CURRENTS.

At the meeting of the Polytechnic, Thursday evening, the Chairman, Prof. S. D. Tillman, commenced proceedings by reading some interesting scientific news from foreign literature.

Mr. Miller exhibited one of his steam pipes, taken from an upright boiler that had been on trial for some time. It was one of twelve tubes in which croton water had deposited one gallon of mud within twelve days. The pipe forms the helix of the larger water pipes of the boiler, and had been described at a former meeting.

Mr. A. L. Fleury next exhibited his revolving apparatus for the diffusion of perfumery, aroma, disinfectants and medicated vapors, employed in the inhaling method of medical practice. He said that he had taken the idea of his apparatus from the Heron's ball, invented by Heron, from Alexandria, 120 years B. C. The apparatus consists of the body or dish, containing the liquid to be diffused, the diaphragm, the two curved tubes on opposite sides of the apparatus, the one turned upwards the other downward, producing on the escape of the vapors a rotary motion as exhibited in turbines, of a pointed pin, on which the apparatus is suspended in its centre and around which it revolves, while the pin is fastened to a lamp or gas-burner, that produces the steam. In using it the instrument is filled to half its capacity with any desirable liquid, as rosewater, carbolic acid, &c. The cap is screwed on and the pin mentioned fastened to a lamp or gas-burner. The steam produced by the lamp will escape through the two pipelets, causing rotation of the apparatus. A discussion ensued as to the merits of distributing vapors by a rotary motion, which was the chief novelty of the apparatus, or by evaporation simply.

Mr. Bacon next exhibited a model of a steam pressure indicator, which, being a great deal smaller than McNold's instrument, was said to be a great deal more sensitive and accurate. The spring in the last-named instrument, being of a large size, recoiled when used, consequent upon the momentum acquired, further than corresponds to the steam pressure tested, thus giving inaccurate results. Especially with engines of great velocity it would become almost entirely useless, while the little instrument exhibited by Mr. Bacon always gave very accurate results. During the discussion several interesting points were mentioned, such as the invention of condensators by Papin, which was generally ascribed to Watt, while the latter only invented the condensers, as applied to low pressure engines. The high pressure engine was said to have been invented by a boy in Watt's office, and was an American invention, while it was generally credited to Watt.

Dr. Stevens next made some remarks on ocean currents and the growth of the earth to its present state. He referred to the different theories put forth at different times, such as the nebula theory, established by La Place and others; the water theory, established by Werner; and the Plutonic theory, established by Hutton. The Doctor explained the growth of those different theories by a conglomeration of ideas and facts, which sometimes were occurring to men without possessing a true common bearing, and were therefore all objectionable, although they had equal claims to general confidence. For the same reason he objected to the theory of currents put forth at a former meeting, as currents could not create anew, but could only transport matter from place to place, forming deposits. The Doctor then explained the growth of the American continent, by the gradual filling up of the watery space between the most eastern point of the continent, the mountains of Missouri, then an island, and the Rocky Mountains further west, all of which formed the nucleus for the continent, filled up gradually by the different geological deposits, as generally recognized to-day. The time being very short, the further discussion of the subject was deferred to the next meeting. However, Professor Grahams, of Hartford, again explained his theory on the subject, given at the previous meeting, stating that there was not one fact in existence which was not in accord with his theory, thus proving its truth—after which the meeting adjourned.

Original Papers.

[WRITTEN FOR THE JOURNAL OF MINING.]

THE NOBLE METALS.

By FRANCIS E. ENGELHARDT, Ph. Dr., Professor of Chemistry in St. Francis Xavier's College.

The gold and silver procured by so much labor and toil, came, as I have stated previously, into the possession of but one individual in the State, the King. These Kings, as ancient history relates, were frequently at war with each other, the weaker was overcome by the stronger, the conqueror, of course, kept possession of the spoils and who was thus enabled to bring together, very often in a short space of time, large quantities of the noble metals. We must likewise bear in mind, that these metals were not coined in ancient times, either in such small pieces or in like quantities, and it is therefore very easily understood, that their coins made from the precious metals did not and could not pass so rapidly from hand to hand as our own currency, especially since money made of brass, copper and iron was employed in the ordinary transactions of daily life. And it naturally follows from this, that the actual loss of gold and silver annually by abrasion, must have been small compared with what it is now. Moreover, the ancients used far less of the noble metals for ornaments, nor did they employ them in such a finely divided state, as we do for instance, in our present method of gilding. Their ornaments were either solid, or if gilded at all, very thinly compared with ours, and consequently were of much greater durability. We may therefore, I think, safely conclude from what I have just said, that even if the ancient mines were less productive than our own, the quantity of gold and silver in bullion and ornaments, which could be at the disposal of a single ruler or individual might have been in many instances as large as those stated by various authors.

THE MINES OF THE ANCIENTS.

It appears now almost certain, that Egypt below the Cataracts contained neither gold nor silver mines in ancient times. There were gold mines on the eastern side of the Nile in the primitive districts lying between the Cataracts and the Red Sea, which were worked in the times of the Ptololmies, and it is more than probable that they were known also

to the Pharoahs. Since we know nothing of their actual yield, we may conclude that the greater part of the treasures of the old Egyptian kings must have been brought to Egypt by commerce, especially from the interior of Africa or from the mines of Nubia and Ethiopia, which produced copper ores in abundance containing gold. Herodotus speaks of Ethiopia as abounding in gold, and mentions the frontiers of Abyssinia and the desert of Bisharee as gold producing. Moreover Belzoni discovered very ancient mines in the Zahara mountains and the ruins of the buildings along the road, appear to be of Egyptian origin. The more southern parts of Africa may also have been one of the principal sources whence the Egyptians obtained gold, since the Greek writer, Cosmas, mentions the country of Susa as very rich in gold mines.

According to Herodotus, the people in the country of Pactycoa, near the sources of the Indus, were employed in the production of gold, and knew of the auriferous nature of the desert steppe of Gobi. The same author says in another place: "In the North there is a prodigious quantity of gold, but how it is produced I am unable to state with certainty." Gmelin, Lepechin and Pallas discovered very extensive ruins of ancient mines on the south-eastern borders of the Ural mountains, and it is stated as probable that they had been worked by the nomadic tribes of the Scythians before the conquest of Siberia by the Tartars. Be this as it may, the great extent of country mentioned as gold bearing, and the remains of mining tools found, go to show that the workmen must have been numerous and only acquainted with the first rudiments of mining, and therefore that the mines are of great antiquity. Some copper ores found in these mines, show particles of gold. It may be interesting to state here that the furnaces observed by Gmelin to the number of about one thousand, are two feet high, two feet broad, and three feet long; some of them contained pieces of molten copper. In the neighborhood are large heaps of scoriae; some of the pits are about twenty fathoms in depth, seven in diameter, and shaped like a well. Gmelin also found the remains of ancient silver mines, and remarks that the lead which had been present with the silver in the ore was all left, and that the scoriae contained only small particles of silver.

We do not know with certainty the localities of the ancient gold and silver mines of India. King mentions the Dardanians as "a people, who inhabit a country which is the richest of all India in gold mines; and the Selians as possessing the most abundant mines of silver." "In the country of the Naraeans, on the other side of the mountain Capitalia, there are a very great number of mines, both of gold and silver, in which the Indians work very extensively."

The land of Ophir whence the Phœnicians and Jews brought large quantities of gold, as I have mentioned previously, may also have been in India. In regard to Lydia, Herodotus remarks: "Lydia, unlike most other countries, scarcely offers any wonders for the historian to describe, except gold dust, which is washed down from the range of the Imolus. Crœsus possessed mines, as Strabo relates, between Pergamus and Atarnes; and Herodotus speaking of the little river Pactolus running by Sardis, says its sand yielded gold dust.

The reputed richness of the gold mines of Armenia induced Alexander to send Memnon with his forces thither, whereupon they were destroyed by the inhabitants of the country, as Strabo relates.

In regard to Europe it is stated that the precious metals were first known there about fifteen centuries before Christ, and that their use was probably first introduced into Greece by the Phœnicians. According to Strabo, Cadmus, the Phœnician, worked the first mines of copper and gold in the mountains of Pangaeus in Thrace, (the Abbé Bartholemy gives the year 1549 before Christ,) while Herodotus affirms that mines of silver also were discovered there. Of the mines of the Island of Thasos, the same author asserts that in his time they yielded 80 talents of gold. The Island of Cyprus had both gold and silver mines, and their productiveness lasted until the time of the Romans. The Temple of Delphi received an annual donation in noble metals, the produce of the extensive mines of gold and silver in the Island of Siphnos, and the Island of Pithecusa, opposite Cuma, yielded gold until its conquest by the Neapolitans. The Athenians worked the gold mines of Thrace and the rich silver mines of Attica, and Philip of Macedon, after having conquered the people on the confines of Thrace (358 years before Christ), took possession of its gold mines, and worked them so well that the yield is stated to have been a thousand talents annually. Thessali also yielded rich gold ores. Italy, according to Pliny, "yields to no country in abundance of mines of all the several kinds of metals, but it is forbidden to dig any of them by an ancient law of the Senate, which expressly commands that the mines of Italy shall be spared." With regard to Upper Italy, we have historic proofs that the present Province of Aosta yielded gold and other metals to the Salassi, and that by washing the sand of the river Po very pure gold was obtained. The district of the Noric Alps (now Illyria) and the country surrounding Aquileja, produced at one time so much gold that the value of this precious metal was reduced in Rome by one-third. Moreover, it is asserted that it was of such good quality that it lost only one-eighth by the process of refining. At the foot of the Pyrenees, silver and gold mines were worked by the Tarabelli. The mines of Hungary, as far as I have been able to ascertain, were not known before the Christian era. Agricola speaks of them in the 16th century as having been worked over a thousand years, which would date them back to the 6th century, while other accounts give the 8th century. In the northern countries of Europe—Sweden and Norway—gold and silver have probably been known to the inhabitants from early times, since, on opening ancient Scandinavian tumuli, swords, knives and daggers have been found, the blades of which were mostly composed of gold, only the edge being of iron, which shows likewise that iron was then prized higher and must have been scarcer than gold.

[TO BE CONTINUED.]

[WRITTEN FOR THE JOURNAL OF MINING.]

MINERALOGICAL SKETCHES OF THE COUNTIES IN SCOTLAND—No. 5.

By H. Dussauce, Prof. Ind. Chemistry to the French Polytechnic; Chemist to the French Imperial Laboratories, etc., etc.

KINCARDINE-SHIRE OR MEARNS.—Here granite abounds, and is quarried at Nigg for exportation. Freestone and plum-pudding stone are abundant at Stonehaven, Fordoun, Ecclescraig, and Arbuthnot in the "How of the Mearns." On the coast the sandstone is red, in the interior it is white. The pudding-stone is formed into millstones at Kincrieff. Porphyry in the North Esk, where it issues from the Grampians. Limestone in Banchory, Ternan, Ecclescraig, St. Cyrus, etc. Asbestos and traces of iron at Balnakettle Hill, near Fettircairn. No coal is found, and there are no mines of ironstone in the county.

KINROSS-SHIRE.—The Ochills run through this small county, and therefore it possesses many of the secondary rocks. There is abundance of limestone, freestone and whin, in almost every parish, and coal is found in the parish of Cleish. The Devil's Mill, Rumbling Bridge and Cauldron Linn, are natural curiosities that attract universal attention.

KIRKCUDBRIGHT-SHIRE.—There are three principal masses of granite in this county, each accompanied with syenite and killas, including each a space of nine or ten miles by three or four. These are the granites of Don, Dee, and Criffle. The Dee granite, near New Galloway, has given rise to many disputes. At the Needle's Eye are fine examples of contemporaneous veins in mass of granite and compact slaty felspar; at Palmire, zircon was first discovered in Scotland; at Criffle and Windy Shoulder, compact magnetic pyrites, sphene, hornblende, rock, etc.; at Kirkbean, stinkstone and lime; at Cree, glossy alum slate. Lead mines wrought at Minigaff from 1765 to 1790; unsuccessful attempts have been made to work it at Gatehouse. Iron was once wrought at Berwick. Lead and copper are found at Kells, talc and asbestos at Buittle, and titanite, rutulite, molybdena and rhomb spar near Newton Stewart, with galena, blende, copper-pyrites and calcareous spar. No coal, we believe, has been found in the county. Millstones have been quarried at Caheend.

LANARK-SHIRE.—This county is divided into an upper, a middle, and an under ward. As coal, lime, and ironstone are found more or less in almost every parish, it will be useless to mention the localities. Tinto Hill contains compact felspar and felspar porphyry, above which are porphyry slate, clinkstone, greenstone, claystone, amygdaloid containing ironclay, flinty slate, etc. To the east of Tinto, in the bed of Clyde is amygdaloid, and to the north of it sandstone, which characterize the whole interior of Lanark-shire, resting on coal, and occasionally covered with basalt. The coal at Calder Iron Works is ten feet thick; the Clyde field three to seven feet thick, and contains six seams; at Cleland twenty-two feet, at Fullarton twenty-four and a-half feet, at Faskine twenty-six feet, at Garrian Hill thirty-nine feet thick. It has been calculated that the coal stretches through this county in one solid mass over nearly 110 square miles, and taking all the coal together is nearly five yards thick. Cannel coal is found in Lesmahagow parish. The lead hills are rich in ores. Gold is found in small quantities; lead is wrought extensively. The ore lies north and south, the veins are about forty feet wide and yield seventy pounds of lead from 1 cwt. of ore. Mr. E., of Hopeton, has a mass of native lead of five tons weight, and a piece of native gold of two ounces. The other minerals found here, and which may be got from the workmen, are, galena, foliated brown spar, white and green lead ores, lead earth, sulphate of lead, calamine, brown hematites, iron pyrites, sparry ironstones, azure copper ores, manganese ore, calcary and heavy spar, mountain cork, etc. At Stonebures the Clyde pours over fine-grained sandstone, passing into conglomerate consisting of pieces of quartz, jasper, splintery, hornstone, flint, clay slate, etc. Limestone with shells found at Stonehouse, freestone that takes a fine polish in Craignethan. In the Duke's park at Hamilton is a petrifying spring where fine pieces of petrified moss are found. In the lower ward around Glasgow, limestone, freestone, coal, trap and ironstone, are abundant. Petrified trees have been found in a quarry near Glasgow, and vegetable impressions are common in the coal of Rutherglen and Kilbride. In Kilbride parish, the Calderwood and Crossbasket ironstones are very rich; calcareous spar, zeolite and steatite, at Blackburn mill; petrifaction at Gillburnsynke Patchall and Burnbrae. In Cathkin Hills near four miles from Glasgow is a range of basaltic pillars; augite, leucite and olivine are found here. Glasgow stands upon great beds of coal and sandstone.

LINLITHGO-SHIRE.—Coal abounds near Bowness, and is wrought there and at Carriden, Uphall, Whilburn, Bathgate, etc. At Bowness the pits have been carried a great way beneath the river Forth; ironstone abounds here and at Carridew, Bathgate, etc. A vein of silver was discovered at Bathgate, and specimens of silver ores may be still found there. Radiated red cobalt ore, and copper nickel occur in this county; mundic at Torphichen, marl in Abercorn, freestone at Queen's Ferry, and basalt in Dundass Hill, parish of Dalmery. A prodigious bed of oyster and mussel shells, stretches from Barrowstouness into Stirlingshire, which is three feet thick, resting on granite covered with thin clay; thirty-three feet above water mark it is traceable at Inverness, and extends for three miles with one mile of coarse ground between it and the Forth.

NAIRN-SHIRE.—Little is known of the mineralogy of this small county. Sandstone occurs near Nairn; marl at Auldearn. No coal has been found, although a stone capable of giving heat and similar to coal is often met with, but it does not serve all the purposes of fuel.

ORKNEY ISLANDS.—These islands consist of horizontal or slightly inclined strata of sandstone and

slate clay, occasionally intermingled with thick beds of red and grey sandstones and limestone. Lead ore is found in the north-east and south-west extremities of Shapinshay, and south Ronaldsha; iron ore in Hoy; wacke at Wass and Capinshay. Near Stromness are small-grained granite, gneiss, and mica slate, containing hornblende rock; these dip under breccia and indurated shale, and may be traced to the mill of Kairston. No traces of copper have been discovered. The dwarfic stone at the Wart hill of Hoy is remarkable; it is freestone, thirty-two feet long, sixteen and a-half feet broad, seven feet five inches in height. The inside is divided into three apartments, in one is a bed five feet eight inches long and two feet broad; in the other is a small room, and in the middle an area for a fire-place, with a hole in the roof for conveying away the smoke.

PEEBLES-SHIRE.—Newlands and Stabo are perhaps the most remarkable parishes for minerals in this county. At Whine, La Mancha, and Magbuhill, in Newlands parish, coal is found. At La Mancha is a quarry of white freestone and alum slate; manganese and iron ores have been found there. Lime at Carlaps, in Linton parish, Whitefield and Spittalbough; red-sandstone at Broomilaw, and blue marl at Carlaps and Spitalhough. In Linton parish below Brighouse is a seam of fuller's earth. Whin abounds in Traquair; slates are wrought in the parish of Stobe.

[TO BE CONCLUDED.]

[WRITTEN FOR THE JOURNAL OF MINING.]

THE ELECTRO-POSITIVE METALS—No. 6.

POTASSIUM—ITS USES.

By JOSEPH HIRSH, Ph. Dr.

The high price of the metallic potassium was up to the present day a bar to its employment in the arts, its chief sphere of action being the laboratory, where it is employed for the reduction of all the other metals from their oxides. The greater abundance, and therefore lower price of the raw material for the production of sodium, than of that for the manufacture of potassium, have so far stimulated the manufacture of the former metal, that in most all cases of reduction, even in the laboratory, it replaces potassium, which therefore, in its pure state, is almost reduced to a chemical curiosity, although it is capable of producing all those results obtained by sodium, and to be described when I shall treat of that metal.

The modest *role* of the pure potassium does not preclude its invaluable usefulness and uses in its combinations with other elements.

United with oxygen it forms our commercial potash, formerly called "vegetable alkali," because it was chiefly prepared from the ashes of plants; it is indispensable in the manufacture of ordinary gunpowder, when united with nitric acid. It is used in our glass and soap works. As bichromate it produces the much admired mauver dye from aniline; as chlorate it is used in the manufacture of matches and some powders; in its pure state surgery employs it greatly for cautery; united with nitric acid it forms a much used refrigerant, cathartic and diuretic, especially adapted to dropsical affections; it forms a constituent of the well known Rochelle salts and Sedlitz powders. Deflagration with nitre changes it into the salt of tartar, a pure carbonate, or into black and white flux according to the quantity of nitre used. The permanganate of potash is one of the most powerful disinfectants and deodorisers, and was greatly used during the last epidemic in this country and in Europe. The sulphate is also greatly employed in medicine as an aperient, enters in the arts, into the composition of glass. The prussiate furnishes the beautiful blue of that name with iron-salts, the sulphocganide was lately greatly used for the precipitation of mercury in the manufacture of "Pharoah's Serpents;" the cyanide is necessary for silver plating, the universal mode of making silver utensils accessible to everybody.

The acetate and citrate are much used in medicine, and in the arts, especially in print-works; the same holds true of the aluminate; the chloride is part of the famous "Eau de Javelle," used for bleaching, as well as the sulphide.

In the laboratory the different preparations of potash are much used as re-agents. Forming a constituent of many plants, potash is a necessary part of the manure used in the cultivation of such plants, as tobacco, sugar beets, etc., which, after having deprived the ground of that alkali, will not grow unless the latter is imparted to the ground again. Being a constituent of the animal fluids, its presence in our food in at least small quantities becomes a necessity. Many renowned mineral springs contain potash and its compounds in large quantity, such as Seltzer, Saratoga waters, etc.

MARKET REVIEW.

FRIDAY EVENING.

Gold and Silver Stocks have been active during the past week, and higher rates have ruled in many Stocks. Alpine has declined 10c. during the week, being held at $1 40; American Flag has been active, and sold yesterday at $1 35@1 40, against $2 20@2 25 the day before—at closing to-day it was held at $2 50; Atlantic and Pacific has advanced, selling after call yesterday at $4—$3 75 was offered to-day against $4 50 asked; Ayres' Mill and Mining, a new stock, was sold during the week at $4 25@4 75, and at closing to-day was held at $5; Bates and Baxter has been quiet and has declined, being held at $2; Benton Gold sold at $1 25@1 35 during the week, and was held at $1 50 to-day; Bobtail, $2@3; Boscobel Silver, $1 50; Bullion Consolidated has declined still lower, selling at $2 50 and $2 80 during the week Burroughs, '30c.; Church Union unchanged; Crozier has declined still lower, being held at 25c.; Consolidated Colorado, 20c.; Consolidated Gregory has been active at an advance, selling at $9 70@$10 90 during the week, and at closing to-day was held at $10 45; Corydon sold at $2 65; Downieville finds purchasers at 9@10c. Echla quiet at $3 20; First National, $4; Gilpin dull at $2; Gold Hill, $4@4 70; Gunnell has been active at 95@97c.; Holman, 25c.: Hope has been active, and at closing to-day was held at $1; Keystone Silver, 8@9c; Kipp & Buell has receded to 85c., although held at $1; La Crosso Gold has been active, selling at $1 30@1 50; Liebig unchanged; Montana Gold continues to advance, being held at 35c.; $1 25 was offered to-day for New York, a decline of 40c. from last quotation; Oak Hill has been active at lower figures, selling to-day at 65c; Ohio and Colorado, 45c.; Pahranagat Silver has advanced, selling at $2 60; People's G. and S., $1 60; Quartz Hill, $2 75@2 80, a decline of 20c.; Rocky Mountain, for which $2 30 was bid on the 3d, was to-day held at $6; Smith & Parmalee has declined 60c. from last quotations, although sales were made during the week at $7 15a7 75; Texas Gold, 15c.; Vanderburg has advanced to 97c.

Copper Stocks.—Caledonia has experienced a reaction. Yesterday it was held at $13, to-day at $7 75, with no transactions; Davidson has been active at lower figures. Other Stocks are quoted as follows:

Canada Copper	55	80
Charter Oak Copper	....	1 10
Davidson Copper	75	85
Evergreen Bluff Copper	....	11 50
Franklin Copper	....	....
Indiana Copper	....	4 00
Minnesota Copper	....	3 00
Ogima Copper	10 00	....

Lead Stocks.—Tudor Lead was steady at last week's quotations. Wallkill has been brisk at $1 35@1 40—an advance of 10 cents.

Miscellaneous Stocks.—Petroleum Iron Tank Storage Co. continues to be active at an advance of $2 50, being held at $65 75; Wallace Nickel not quoted; Rutland Marble has advanced $1, $21 being offered; Long Island Peat, $3 05@4 05.

Petroleum Stocks are quoted as follows:

	Offered.	Asked.
Benuehoff Run	$4 00	$4 75
Buchanan Farm	20	25
Central	75	1 35
Excelsior	....	25
First National	....	..
Germania	....	..
Manhattan	....	25
Mountain Oil	....	..
N. Y. and Alleghany	5 00	5 40
New York and Newark	....	12
N. Y., Phil. & Baltimore	....	..
Pit Hole Creek	75	1 20
Rynd Farm	10	30
Shade River	....	12
United States	3 50	4 30

Coal Stocks—Cumberland 68.

Government Stocks are steady at lower rates.

	Offered.	Asked.
U. S. 6's, '81	112⅝	113
5.20's, '62	108¼	..
5.20's, '65, new issue	108¾	108⅞
10.40's	100	....
7.30's, 1st series	105¼	....
7.30's, 2d series	..	105⅛

Foreign Exchange is firm. Bills at sixty days on London are quoted at 108¾@109¼ for commercial; 109¾@109¾ for bankers'; do. at short sight, 110⅛@110¼; Paris at sixty days, 5.17½@5.13¾; do. at short sight, 5.13¾@5.11¼; Antwerp, 5.17½@5.15; Swiss, 5.17½@5.15; Hamburg, 36¾@36⅝; Amsterdam, 41¼@41½; Frankfort, 41¼@41½; Bremen, 79@79¼; Prussian thalers, 72@72½.

Gold was 138¾ at 2 P. M.

Copper.—Ingot fell to 27½ at the beginning of the week, but now is in better demand, at 28¼c. for Detroit, and 27½@28c. for Portage Lake

Iron.—American is scarce at previous rates. Scotch pig has declined about $1 per ton; Glengarnock is quoted at $52@$53, though small lots have been sold at $54@$55.

Steel continues steady at old rates.

Tin.—Pig is very quiet again, and we notice the sale 100 slabs Straits at 21¾c., Banca, 23½; and English 21¼c. gold. Plates are dull and scarcely so firm; 100 bxs. I. C. Charcoal Tin sold on private terms; and 400 do. I. C. Coke, $8 50@$8 75 gold.

Lead.—The demand for pig is still limited, ordinary may be quoted 6½ cents, and prime soft 7⅛, gold. Bar is steady at 10 cents, and Sheet and Pipe at 10¾, net cash.

Spelter.—Remains dull; 6@6½ cents gold is the nominal quotation for Silesian; American 11c.

Salt.—The market for both sack and bulk is extremely dull, and, in the absence of sales, prices are entirely nominal.

Zinc.—Remains quiet

Petroleum.—Is dull, heavy, and lower. We quote crude 40@47 gr. in bulk, at 13@13½ cts; do. in barrels, at 20 cts, refined, 110 deg. test, light straw, 27@28c.; light straw to white, 28@29c; prime light straw to white, 30c.; standard white, 30½@31 cts.; prime white, 32 c.; free oil, 49@50 cts.

Gunpowder.—Blasting (A), per keg of 25 lbs, $5; Mining, $5.50; Rifle, $7.50.

THE COAL TRADE.

FRIDAY EVENING, Dec. 7, 1866.

Wholesale.—Trade has virtually closed for the season. There is nothing doing in any of the branches—foreign not excepted. Dealers are looking forward with much interest, and speculating as to the course matters will take during the next three months. The future of trade is a perfect enigma to the oldest and most experienced trader. In Trinity Building (the Coal Exchange of this city) may be seen knots of dealers discussing the perplexing questions: Will the carrying companies reduce their freights and tolls? Will the miners submit to a reduction in wages? etc., etc. If we have a severe winter, there will be but a moderate supply of coal on hand next spring at the opening of navigation, and no doubt mining will be conducted more judiciously during next year. It is to be hoped that some agreement will be made with the various carrying companies whereby the trade can be made profitable to all parties interested, and another season may prove (what this has not) remunerative.

Our correspondent at Beach Haven, Pa., says: We have had a heavy freshet, and the damages are not yet known. May resume when the water falls, but close for the season on the 10th proximo.

Retail.—Trade has improved during the past week. Dealers have generally reduced their prices, and now coal can truly be said to be the cheapest article we consume. Stocks on hand are generally light, dealers having had fair warning of the late fall in prices, and were consequently prepared. Prices now range from $6 25 to $8 for the various sizes and qualities.

Foreign.—In sympathy with the Anthracite, trade is very quiet; prices are firm, however, at our quotations, in consequence of the small supply on hand and the high freights on the other side.

Lehigh Coal Trade, for Week Ending Saturday December 1.

OPERATORS.	RAILROADS. Week.	RAILROADS. Total.	CANAL. Week.	CANAL. Total.
Ashburton Coal Company	757	757	....	163
Audenreid	....	14,967	162	13,527
Baltimore Coal Company	650	34,620	532	13,195
Buck Mountain	1,632	56,795	396	24,485
Central Coal Company	....	....	....	....
Coleraine	588	34,072	879	25,572
Council Ridge	2,014	92,806	....	....
Coxe Bro. & Co	644	17,938	490	7,266
Coonery, John	....	3,778	....	....
Coal Run Coal Company	....	155	....	....
Delano	964	29,066	....	5,205
East Sugar Loaf	1,968	183,237	....	....
Ebervale Coal Company	1,796	56,502	736	27,758
Franklin Coal Company	565	19,744	360	12,552
Ger Pa Coal Company	154	45,040	163	25,282
Glendon Coal Company	169	23,331	....	6,784
Germania Company	212	9,131	217	10,715
Hazleton	1,685	245,914	377	76,485
Harleigh	257	47,424	88	16,729
Highland Coal Company	....	....	....	....
Honey Brook Coal Company	1,034	124,323	1,223	32,327
Hull & Co., Thomas	....	....	....	14,230
Jeddo (G. B. M. & Co.)	2,648	139,755	712	55,597
Knickerbocker	68	24,158	96	9,766
Laubach, J. & Co	....	....	....	1,475
Lehigh Zinc Company	....	7,464	....	....
Lehigh & Susquehannah	....	16,031	188	11,842
Lehigh Coal & Navigation Co.	....	....	8,254	399,619
Mahanoy	151	11,097	....	....
Mount Pleasant	215	20,388	....	....
Meadow, B. (D. W.)	37	2,114	98	6,475
McNeal Company	299	54,238	....	21,270
Meyers, H.	237	9,770	....	....
Mount Etna Coal Company	....	....	....	4,327
New Boston C. Co	....	5	....	....
New Port C. Co	....	1,026	188	1,524
New York & Lehigh	845	67,424	....	....
New Jersey	129	3,869	....	5,301
North Mahanoy	....	....	....	8,585
Packer, Skeer & Co	....	....	1,289	84,219
Patterson, W. T.	....	....	....	....
Parish & Thomas	577	20,953	....	405
Primrose Coal	....	....	188	1,342
Rathburn, Stearns & Co	618	37,504	....	....
Reber, J. B. & Co	268	7,161	....	....
Sharpe, Weiss & Co	....	....	192	29,804
Stout Coal Company	648	44,998	628	18,821
Spring Mountain	1,295	134,361	....	6,268
Silliman	1,866	47,310	....	....
Shamokin Coal Company	....	2,202	....	....
Thomas Coal Co	....	....	356	3,085
Trenton Coal Company	....	263	....	379
Union	96	1,486	355	3,962
Wilkesbarre	372	55,760	848	45,686
Woodside Company	....	....	....	....
Warrior Run	....	6,739	....	6,310
Wyoming	212	3,908	100	1,552
Walter Bro. & Co	....	....	....	12,750
Other shippers	328	12,989	1,199	13,405
Total	26,644	1,757,118	20,322	1,066,138
Corresponding week last year	29,851	1,431,127	27,399	879,558
Increase	3,207	....	....	186,569
Decrease	....	325,991	7,077	....

Reports of the Coal Traffic for the Last Week

as compared with those of the corresponding week last year, are as follows:

	1865.		1866.		
	WEEK.	TOTAL.	WEEK.	TOTAL.	INC & DEC
Phil. & Reading R.R.	....	2,813 518	31,229	3,425,330	i 611 812
Schuylkill Canal	....	1,001,710	19,201	1,281,316	i 279,606
Lehigh Val. R. R....	23,129	1,409,606	26,644	1,733,285	i 324,279
Lehigh Canal.....	27,349	879,558	20,322	1,066,138	i 186,580
Del & Hudson.....	27,905	713,962	30,000	1,280,269	i 566,307
Scranton North	9,702	231,483	8,416	401,758	i 170,275
Scranton South.....	21,286	660,250	24,741	999,732	i 339,482
Penn'a. Coal Co. Rail	16,412	487,880	15,211	460,356	d 27,524
by Canal	1,837	47,025	.....	24,909	d 22,116
Wyoming North	.....	75,213	.....	106,370	i 31,157
Wyoming South	.....	324,161	10,720	461,664	i 137,503
Shamokin.....	11,736	432,095	14,220	517,794	i 85,699
Trevorton.....	1,607	23,855	433	50,901	i 27,046
Short Mountain	1,839	72,204	2,859	97,285	25,081
Franklin	1,245	58,514	.....	32,747	d 25,767
Broad Top.....	.....	295,303	3,827	251,716	d 43,587
	143,888	9,625,737	197,823	12191570	.....
	.....	.....	.....	9625737	.....
Increase.....	.....	.....	.....	2565833	.....
Decrease.....	.....	.....	.....	.....	.....

Prices of Coal by the Cargo.

At New York, Dec 7, 1866.

Schuylkill Red Ash by Boat Load	$7 00@	$7 50
" Chestnut, " "	4 50	5 25
" White Ash Lump	6 25	6 75
" Steamboat	6 25	6 75
" Broken	6 25	7 00
" Egg	6 52	7 00
" Stove	6 50	7 00
" Chestnut	4 75	5 50
Lehigh White Ash Lump	6 50	7 00
" Broken	6 50	....
" Egg	6 25	....
" Stove	6 75	....
" Chestnut	5 50	....
Western Virginia Gas Coal	10 00	....
Westmoreland Gas Coal	10 00	..
Blossburg & Fall Creek	7 25	7 40

At Philadelphia, Dec. 7, 1866.

Schuylkill Red Ash Prepared	$5 50@	$6 00
" Chestnut	4 00	.. ..
" White Ash Lump and Steamboat	5 00	.. ..
" Broken	5 00	.. ..
" Egg and Stove	5 25	.. ..
" Chestnut	4 00	.. ..
Locust Mt. Lump, and Steamboat	5 25	.. ..
" Broken	5 25	.. ..
" Prepared	5 50	.. ..
" Chestnut	4 25	.. ..
Lorberry Coal	5 75	.. ..
Shamokin	5 75	.. ..
Franklin, (Lykens Valley)	6 25	.. ..
Broad Top	5 50	.. ..

Scranton Coal at Elizabethport.

Lump	$4 50@	— —
Steamer	5 25	— —
Grate	5 50	— —
Egg	5 50	— —
Stove	6 00	— —
Chestnut	4 25	— —

Prices for Pittston Coal at Newburgh.

Lump, per ton of 2240 lbs	$6 25	.. ..
Steamer, " " "	6 35	.. ..
Grate " " "	6 40	.. ..
Egg " " "	6 50	.. ..
Stove " " "	6 75	.. ..
Chesnut " " "	5 00	.. ..

70 cents per ton additional for delivery at N. York

Lehigh Coal at Elizabethport.

Lump	6 75@	$7 00
Steamboat and Broken	6 50	— —
Egg	6 50	— —
Chestnut	5 50	6 00
Stove		7 00

George's Creek and Cumberland Coal.

Run of mine, f. o. b. at Locust Point	$5 75@	.. ..
At Georgetown	5 50	.. ..

At Baltimore, Dec. 7, 1866.

Wilkesbarre & Pittston W A., wholesale	$7 50@	$7 75
" " " retail	8 50	8 75
Lykens Valley & Sunbury R A., wholesale	7 50	7 75
" " " retail	8 50	8 75

At San Francisco.

(From the California Gazette.)

Australian	$9 00@	9 50
Do Wallsend	9 50	.. ..
Pittston, ton		.. ..
Lehigh		.. ..
Cumberland, cks	24 00	.. ..
do bulk	22 00	.. ..
Scranton	17 00	18 00
Liverpool		.. ..
Scotch		.. ..
West Hartley	12 00	.. ..
Vancouver Island	11 00	.. ..
Bellingham Bay	10 00	.. ..
California	6 00	8 00

Prices of Foreign Coals.

[REPORTED FOR THE JOURNAL OF MINING.]

BY H. L. PARMELE & BRO., 32 Pine street, N. Y.

Duty $1.25 per ton.

Liverpool Gas Caking	$11 00
" " Cannel	16 00
" House "	18 00
" " Orrel	16 00

Per ton 2240 lbs.

PRICES FROM YARD:

Liverpool Orrell, screened	20 00
" Cannel, "	22 00

per ton 2000 lbs. delivered.

Prices of Provincial Coals.

[REPORTED FOR THE JOURNAL OF MINING.]

BY LOUIS J. BELLON I, JR., 43 Pine street, N. Y.

Duty $1.25 per ton.

Block House (on board)	$1 75 gold.
Gownie	1 75 "
Liugan	1 75 "
Sidney	2 28 "
Pictou	2 25 "
Glace Bay	1 75 "
International Co.'s	1 75 "
Slack Coal	75 "

Coal Freights.

By Railroad.

Transportation from Schuylkill Haven to Pt. Richmond	$2 25
Freight from Pt. Richmond to New York	1 60
Total	$3 85

From Port Carbon 8 cents per ton more.

By Canal.

Toll from Schuylkill Haven to Philadelphia	$1 15
Freight from Schuylkill Haven to New York	2 70
Total	$3 85

Canal Expenses from Mauch Chunk to N. Y.

Lehigh Canal (net)	58
Delaware Division Canal	42
Delaware & Raritan Canal	50
Towago, New Brunswick to New York	25
Freight, Mauch Chunk to New York	$1 55
Total	$3 30

Freights on Coal to Elizabethport.

L. V. R. R. from Mauch Chunk to Easton	$1 15
C. R. R. of N. J., Easton to Elizabethport	1 70
	2 85
Shipping expenses at Elizabethport	25
Total	$3 10

Via Morris Canal.

Lehigh Canal	58
Morris "	90
Towago	12½
Freight	$1 80
Total	$3 40½

Expenses from Mauch Chunk to Jersey City for Reshipment.

Lehigh tolls (net)	— 58
Morris tolls	— 75
Freights	1 75
Reshipping	— 30
Total	$3 38

From Baltimore.

To Philadelphia	$2 25@	— —	Boston	3 75@	— —
New York	2 25	— —			
do by Canal	3 25	— —			

From Georgetown or Alexandria.

To Philadelphia	$2 50	— —	Boston	3 50	3 75
New York	3 25	— —			

From Port Richmond, Philadelphia.

Reported by the Coal Exchange, Dec. 7

Albany (& towing)	$1 70@	— —	Newburg	$1 68@	— —
Alexandria	1 55	— —	Newburyport	2 40	— —
Appanoag	2 00	— —	New Haven	2 00	— —
Aspinwall	7 00	— —	New London	2 05	— —
Bangor	2 00	— —	Newport	2 30	— —
Bath	3 60	— —	Newport, R. I.	1 90	— —
Baker's Landing	—	— —	New York	1 60	— —
Bedford	—	— —	Norfolk	1 40	— —
Boston	3 00	3 10	Norwalk	2 15	— —
Bridgeport	1 80	— —	Norwich	2 32	— —
Bristol	1 90	— —	Pawtucket, & tow'g	2 25	— —
Calais	3 50	— —	Petersburg	2 00	— —
Cambridgeport	3 50	3 50	Portland	3 20	— —
Catskill (& tow)	2 00	— —	Portsmouth, N. H.	2 50	— —
Charleston, S. C.	2 25	— —	Providence	2 10	— —
Charlestown	2 10	— —	Provincetown	1 90	— —
Chelsea	2 12	— —	Poughkeepsie, & t'g	1 60	— —
Commercial Point	3 00	— —	Port Chester	1 60	— —
Davenport and dis.	3 25	— —	Plymouth	2 25	— —
Delaware City	80	— —	Richmond	2 00	— —
Dighton	2 00	— —	Rockland	2 30	— —
East Greenwich	2 10	— —	Roxbury	3 35	— —
Fall River	2 25	— —	Saugus	2 50	— —
Fort Monroe	1 60	— —	Sing Sing	1 60	— —
Fredericksburg	2 25	— —	St. Johns (in gold)	1 50	— —
Georgetown	1 50	— —	Salem	3 25	— —
Gloucester	3 15	— —	Savannah, Ga	2 00	— —
Lynn and dis	3 00	— —	Stonington	2 25	— —
Milton	3 75	— —	Washington, D. C.	1 55	— —
Malden	2 50	— —	West Point & tow	1 70	— —
Mobile	5 10	— —	Wilmington	1 00	— —
Neponsett	3 20	— —	Williamsburg	2 87	— —
New Bedford	2 25	— —	Winterport	2 60	— —

From Newburgh.

Albany	55@	.. ..	Norwalk	$1 35@	.. ..
Barrytown	40	.. ..	Norwich	1 60	.. ..
Boston	2 00	.. ..	Nyack	50	.. ..
Bridgeport	1 35	.. ..	Pawtucket	1 75	.. ..
Bristol	1 55	.. ..	Peekskill	40	.. ..
Catskill	40	.. ..	Poughkeepsie	25	.. ..
Cold spring	30	.. ..	Providence	1 60	.. ..
Coeymans	50	.. ..	Rhinebeck	30	.. ..
Coxsackie	45	.. ..	Saugerties	40	.. ..
Dighton	1 60	.. ..	Sing Sing	50	.. ..
Fall River	1 55	.. ..	Stamford	1 35	.. ..
Fishkill Landing	20	.. ..	Stonington	1 45	.. ..
Greenbush	$ 55	.. ..	Stuyvesant	45	.. ..
Haverstraw	45	.. ..	Tarrytown	50	.. ..
Hudson	40	.. ..	Troy	60	.. ..
Mystic	1 45	.. ..	Warren	1 60	.. ..
New Haven	1 35	.. ..	West Point	30	.. ..
New London	1 45	.. ..	West Troy	60	.. ..
Newport	1 55	.. ..	Yonkers	55	.. ..
New York	70	.. ..			

From Elizabethport.

Albany	$1 00@	— —	New London	1 30@	— —
Boston	2 00	— —	Newport	1 50	— —
Bridgeport	1 20	— —	New York	70	— —
Fall River	1 50	— —	Norwalk	1 20	— —
Hartford	1 75	— —	Norwich	1,40	— —
Hudson	1 00	— —	Pawtucket	1 75	— —
Lynn	—	— —	Portland	2 00	— —
Middletown	1 50	— —	Portsmouth	2 15	— —
New Bedford	1 50	— —	Providence	1 50	— —
Newburyport	2 25	— —	Salem	2 00	— —
New Haven	1 20	— —	Taunton	1 40	— —

Provincial Freights.

Sydney to N. Y.	$4 50
Lingan	4 50
Cow Bay	4 50
Glace Bay	4 50

Foreign Freights.

New Castle and Ports on Tyne	19s. @ keel.
Liverpool	15s. @ 20s.

Schuylkill Coal Trade by Railroad.

	Nov. 30th.	Week ending Dec. 6th.
From St. Clair	3,218 16	6,783 00
" Port Carbon	1,253 03	2,949 00
" Pottsville	72 00	67 00
" Schuylkill Haven	4,774 16	8,648 00
" Auburn	688 13	1,908 00
" Port Clinton	1,221 16	1,495 00
Total	11,229 04	21,850 00
Previously this year	3,414,101 06	
Total	3,425,330 00	
Same time last year	2,813,518 00	
Increase	611,812 04	

Schuylkill Canal Coal Trade,

For the week ending Thursday, December 6, 1866:

	Tons. Cwt.
From Port Carbon	6,363 08
" Pottsville	57 02
" Schuylkill Haven	11,734 00
" Port Clinton	1,407 00
Total for week	19,201 10
Previously this year	1,262,114 17
Total this year	1,281,316 07
To same time last year	1,001,710 06
Increase	279,606 01

Cumberland Coal Trade.

[FROM THE CIVILIAN AND TELEGRAPH.]

Statement of coal transported over Cumberland and Pennsylvania Railroad during the week ending Saturday, Dec. 1st, and during the year 1866, compared with the corresponding period of 1865:

WEEK.

	TO C. & O. CANAL.	TO B. & O. R. R. & C.	TOTAL.
1866	8,972 15	10,820 12	19,793 07
1865	4,582 13	11,265 17	15,848 10
Increase,	4,390 02		3,944 17
Decrease,		445 05	

YEAR.

	TO C. & O. CANAL.	TO B. & O. R. R. &C.	TOTAL.
1866	285,420 08	550,519 06	835,939 14
1865	284,409 01	348,005 12	632,414 13
Increase,	1,011 07	202,513 14	203,525 01

WEEKLY COAL TRADE CIRCULAR.

NEW YORK, Dec. 7, 1866.

The Coal season of 1866 has fairly closed, and the producers of Coal will now look about them and see what steps are to be taken another season to avoid the disastrous losses that have befallen them this year. The prominent topic of discussion amongst them at present is the exorbitant charges of transportation now current. Whilst the loss of the producer has been heavy, the transporter has had a season of unparalelled prosperity. Before the business of 1867 commences, this inequality must be adjusted. The high cost of labor is another topic of discussion. An anticipated shrinkage of values in the necessaries of life, which has already commenced, and is likely to continue, will enable the laborer to work for lower wages. With transportation and labor reduced to conform to the changed value in the market—of Coal—it is expected the business, another season, can be prosecuted so as to return a fair remuneration for the amount of capital involved, which is large, and should be productive. The production of Coal in 1866 has been about 3,000,000 tons in excess of the product of 1865, being the largest annual increase in production that has ever taken place in a single season. The great decline in value has been partially occasioned by the unusual increase of production. This large percentage of increase cannot occur another season, as, owing to the disastrous season for miners this year, they will not be able to make the usual winter's preparation to secure an increased production. Prices of Coal are without any change. The market remains quiet. The weather keeps unusually mild for the season. Until the winter fairly sets in, the market will continue, as at present, in favor of the buyer.

L. A. & Co.

BOSTON STOCK MARKET.

BOSTON, Dec. 6, 1866.

The market shows considerable improvement since our last. Crescent Pet. is steady at 8@10c.; Mass. and Oil Creek is very strong at 12c., and the prospect of a rise is excellent; Indian Spring has been sold at 13c.; Pepper Well Pet. has declined, and is offered at 80c.; Gilberton Coal, $20 bid, $23 asked; Harleigh Coal is offered at $53, a decline of $5 since our last; Lackawanna is offered at $6; only $2 is bid for Mammoth Vein Coal; Short Mountain is strong at $14 bid; and $3 75 is offered for Summit Branch, without bringing out any of the stock.

Gold Stocks are still neglected. Colorado Gold is considered cheap at $1 50; Montezuma Gold weak at $1 45, although there seems to be a movement under way; Automatic Gas is strong at $1; Tudor Lead is quiet at $2 75 bid; Franklin Telegraph is steady at $7@$7 75; Insulated Telegraph is offered in large quantities at $12.

THOS. C. LOMBARD & Co., 99 State street, Boston.

SAN FRANCISCO STOCK MARKET.

Latest by Telegraph.

SAN FRANCISCO, Dec. 5

Name.	Bid per foot.	Name.	Bid per foot.
Gould & Curry	600	Crown Point	1200
Savage	1900	Yellow Jacket	1175
Chollar-Potasi	210	Belcher	135
Ophir	225	Alpha	50
Hale and Norcross	2000	Imperial per share	130
Cal. Steam Navigation Co	65½	Cal. State Telegraph Co	38

☞ According to the invention of Mr. T. Prideaux, of Sheffield, the puddling furnace has at the back thereof a raised surface, inclining upwards from the bridge, and provided with openings with valves through which the metal to be treated may be introduced. By this means the pigs get warmed before falling into the bed, which they reach in a liquid state. Two puddling chambers may be arranged to one melting chamber. The air is passed from the atmosphere to the puddling chamber through flues formed in the arch thereof.

NEW YORK METAL MARKET.

(CORRECTED WEEKLY.)

COPPER—Detroit, ℔ lb., cash	.. 28½	.. ..
Portage Lake	.. 27½	.. 28
Baltimore	.. 28¾	.. ..
Pig Chili	.. ..	.. ..
Bolts	.. 42	.. ..
Braziers	.. 43	.. ..
Sheathing	.. 40	.. ..
Yellow metal	.. 30	.. ..
IRON—Pig.....No. 1 Scotch, ℔ ton	53 00	55 00
No. 1 American	50 00	51 00
No. 2 "	46 00	40 80
No. 2 Charcoal	43 00	40 40
Bar.....Swedish, assorted sizes	..	170 00
Amer. and Eng refined	115 00	.. ..
" " common	105 00	.. ..
Rails, American at Works	85 00	90 00
" English (Gold)	52 00	54 00
Horse shoe iron	140 00	150 00
Rods 5-8@3-16	120 00	175 00
Band	147 50	.. ..
Nail rods	9¾	10¾
Hoops	150 00	210 00
Sheets, Russian, ℔ lb	21	23
" English "	.. 6¼	.. 8
" American "	.. ..	.. ..
Boiler Plates, English	.. ..	.. ..
" American	.. ..	.. ..
STEEL.....English, cast, (2d & 1st q) ℔ lb	18½	.. 24
" Spring, " "	.. 11½	.. 13
" Blister, " "	.. 12½	.. 20
" Machinery, "	.. 14	.. 16
" German, (2d & 1st q)	.. 15½	.. 17½
American Blister, Blk Dim'd	.. 11½	.. 17
" Cast, Tool, "	.. 19	.. ..
" Spring, "	.. 12	.. 15
" Machinery, "	.. 15	.. ..
" American German,	.. 13	.. 14
LEAD.....Galena	.. ..	.. ..
German (Gold)	6 62½	6 75
Spanish "	6 62½	6 75
English "	6 75	7 12½
Bar (nett)	.. ..	10 00
Pipe and sheet "	.. ..	10 75
TIN.....Banca, gold	.. ..	23½
Straits	21¾	22
English	21¾	.. ..
TIN PLATES.....IC charcoal, ℔ box (Gold)	9 37½	9 75
IC Coke " "	7 25	9 00
Charcoal Terne "	9 50	.. ..
Coke Terne "	6 75	10 00
QUICKSILVER	85	90
SPELTER.....Lehigh, per lb., currency	11	11½
Foreign " gold	6	8½
ZINC.....Sheet	.. 13	.. 13½
SOLDER.....No. 1	.. 24	.. ..
No. 2	.. 22	.. ..

Patent Claims.

Interesting to Miners, Millmen, Metallurgists, Oil-Men and Others.

The following claims have recently been issued, from the United States Patent Office :

59,940.—FORGING APPARATUS.—John Gay Newton Alleyne, Alfreton, England, assignor to Zoheth Sherman Durfee, Pittsburgh, Pa.:

1st, I claim the combination and arrangement of two or more direct-acting steam hammers, each connected with a separate steam cylinder so as to be susceptible of simultaneous, or alternating, or other relative action as may be desired, and so situate relatively to each other as that their strokes converge at a central point at which the iron to be worked is placed, substantially as hereinbefore described.

2d, The combination of two or more horizontal or nearly horizontal direct-action steam hammers, with or without a vertical steam hammer, arranged substantially as hereinbefore described, and connected by links attached to a counter weight for the purpose of producing uniformity of action of the horizontal hammers, and of compensating for the force of gravity of the vertical hammer, when used in connection therewith.

3d, The combination of two or more horizontal or nearly horizontal direct-action steam hammers, with one vertical or nearly vertical steam hammer, so arranged as to strike a mass of iron placed at the converging point of their stroke, when such horizontal hammers are both connected by links, or equivalent device, with the vertical hammer, so as to act alternately therewith and produce regularity and uniformity of action.

4th, The use of rollers or wheels, in combination with the hammer blocks of steam hammers, for the purpose of sustaining and guiding the hammer blocks in their motion in a horizontal or nearly horizontal direction, substantially as hereinbefore described.

59,954.—COMBINED COAL HOD AND SIFTER.—Benjamin F. Brown, Portland, Me.:

I claim the combination with a hod of the form described, of the sifter, constructed and set forth as and for the purpose specified.

59,955.—SEPARATING GOLD AND SILVER FROM ORES.—Edmund Brown, Chicago, Ill. Ante-dated October 20, 1866:

1st, I claim the application of compressed air for forcing the quartz down into the lead.

2d, I claim the tubes, D D, running down the outside of the kettle, allowing the quartz to become thoroughly heated and desulphurized, the whole combined and arranged for the purpose specified.

59,960.—ROCK-DRILLING MACHINE.—Charles Burleigh, Fitchburgh, Mass.:

I claim the annular projection, M, upon the piston-bar, E, or an attachment thereto, for the purpose of operating the valve and feeding device of either of them, substantially as set forth.

2d, The stationary rotating device when operated by the movement of the piston bar, substantially as shown and described.

3d, The hollow valve, K, with its chest, L, arranged to operate in line with the axis of the cylinder, substantially as described.

4th, The camp, C, consisting of the box, c, and pieces, A and B', constructed and operating substantially as described, in combination with the shue or drill frame, B.

59,963.—FEED MOTION FOR DRILLS.—G. F. Case, New York City:

I claim the sleeve, B, which carries the worm, f, and cam wheel, g, in combination with the feed screw, A, nut, D, and worm wheel, h, all constructed and operating substantially as and for the purpose described.

60,001.—METHOD OF EXHIBITING THE GAS OF MINERAL SPRINGS.—J. P. Haskins, Saratoga Springs, N. Y.:

I claim the method herein described of exhibiting the gas contained in mineral waters while they are ascending through the same and before reaching the surface.

60,002.—MANUFACTURE OF WROUGHT IRON AND STEEL DIRECT FROM THE ORE.—William Henderson, Glasgow, Scotland :

1st, I claim the several improved processes hereinbefore described for manufacturing wrought iron and steel direct from the ores of iron.

2d, The formation of the bottom of the furnace to be used in the working of the above-described processes with the materials and in the manner hereinbefore described.

60,057.—METHOD OF SINKING TUBULAR WELLS.—Orrin Pratt, Athol, Mass.:

I claim so combining with an external tube or case a boring instrument such as described, so that said instrument will bore a suitable hole for, and carry down with itself, the external tube, which can remain while the borer is withdrawn, and until the tubular well and strainer are introduced and the external tube then withdrawn from the hole, the operation being such substantially as described.

60,070.—BLOW PIPE.—Friedrick Shaller, Hudson, N. Y.:

I claim, 1st, The arrangement of the blow-pipe, J, and the piston blower, C B, in relation with each other and with the worktable, b, and air reservoir, G, substantially as herein set forth for the purpose specified.

2d, The arrangement of the treadle, R, pitman, z, cranks, 5 and 8, bent connecting rod, N, and lever, M, in combination with each other and with the spring, T, substantially as herein set forth for the purpose specified.

Special Scientific Brevities.

☞ The *Chemical News* has been favored by Mr. Mellor, manager of the Magnesium Metal Company, with some bars of absolutely pure magnesium, which have been prepared for the purpose of replacing zinc for the detection of arsenic and other poisonous metals. They have been submitted to experiment, and they perfectly answer the object in view. Tested in Marsh's apparatus, there was not the faintest indication of anything which could simulate the appearance presented by arsenic. Chemists who have been in the habit of working with even the purest zinc ordinarily obtainable will appreciate this new application of magnesium.

☞ In a note on the employment of a double wire rheometer in experiments on radiant heat, sent to the Academy of Sciences by M. P. Desains, the author states that he employs a kind of differential apparatus essentially composed of a single source of heat, of two piles, of a double wire rheometer, and finally of a rheostat. The apparatus is so arranged that the equilibrium, once obtained, remains uniform, however the heat from the source varies; but if the smallest variation takes place in one of the radiations the needle quits the zero point. M. Desains has applied this apparatus to the examination of the absorption of heat by transparent gases, and finds that it gives very delicate and certain indications.

☞ At a late meeting of the Austrian Society of Engineers, grate-bars were shown which had suffered an expansion of 0 08 of a meter in every meter. This expansion had taken place not only longitudinally, but in all directions, and was ascribed to the transgression of the limits of electricity by long application of a high temperature. Experiments are now being conducted for the purpose of ascertaining the laws in reference to this permanent set.

☞ The leading shale oil makers have proposed to Mr. C. J. Richardson, the inventor of the petroleum furnace, to have Woolwich petroleum boiler at work in a few days. Their object is to judge for themselves of its utility, and they will supply the oil for the trials. Mr. Richardson intends to obtain the sanction of Government of these trials, to which gentlemen interested in the question of liquid fuel are invited.

☞ M. Kopp has communicated to the Academy of Sciences the result of some practical experiments on the nitroleum used in quarries in France for blasting purposes. Fifteen hundred grammes will detach about seventy cubic metres of hard rock.

☞ It is reported that after the close of the Paris Exhibition the "Great Eastern" will be taken by the French Transatlantic Telegraph Company, and employed to lay the cable between France and America.

☞ The two Atlantic cables can send fifteen hundred messages a day. Each cable can transmit from fifteen to twenty words a minute. Twenty Daniel's cells are used; from fifty to five hundred have been used on the cable of 1858.

☞ A steam yacht, owned by Mr. Barff, of Glasgow, has made two trips to Gravesend and back, propelled by steam raised with liquid fuel, without the use of an atom of coal.

All Sorts.

☞ A young "lion" in Paris is amusing himself by driving about four-in-hand in a smart barouche. Four immense Pyrenees dogs take the place of horses, and gallop nearly as fast—quite as fast as the Paris police rules permit.

☞ The Boston *Traveller* learns that the Boston and Providence Railroad have lately laid three or four miles of steel rails on their road beyond Roxbury, and the officers think they are a great improvement on iron rails.

☞ The sweetest word in our language is Love. The greatest word in our language is God. The word expressing the shortest time is Now. The three make the greatest and the sweetest duty man can perform.

☞ Prentice, in a wicked lunge at the very underpinning of society, says, "Tilting hoops enable the common people to see a great deal more of good society than they ever saw before."

☞ The profits of Lord Derby's version of the "Iliad" amount to £1,359, and have been invested as a prize for the pupils of Wellington College.

☞ M. Toutmoncil has addressed a memoir to the Academy of Sciences representing that indulgence in hippophagy is calculated to result in ossification of the heart.

☞ The proportionate cost of railways, in round numbers, taking the United States as 1, is Germany 2, France 3, and England 4.

☞ Since the reduction of one-half in the tariff for despatches over the Atlantic cable there has been a large increase of business.

☞ A new piano is announced at Paris. The strings are replaced by turning forks, emitting notes of great power and sweetness.

☞ It is intended to forward to the Paris Exhibition a pyramid representing the space which would be occupied by all the gold produced in Victoria during the last fifteen years. The height of the pyramid will be 50ft. 10in., and at the base it will measure 10ft. square. Its cubic measure will be 1,994 ft., and it will represent a weight of 1,071 tons 3qrs. 12 lb., of the value of £140,000,000.

MORE KIND WORDS.

From Ryland's Iron Trade Circular, Birmingham, England, Oct. 27, 1866.

The AMERICAN JOURNAL OF MINING is a journal whose information is thoroughly reliable, and of exceeding value to all engaged in the metal trade, from the curious and special knowledge which it imparts on mining and mineral production in the most out of the way parts of the world. From far Vancouver to mysterious Nevada, and the once impenetrable regions bordering on the Colorado; from Utah, over-woman'd, to San Francisco, super-abounding in males; from silvery Mexico and coppery Chili; from golden Peru, and the extensive range of the Arancannian Cordilleras—as yet almost virgin—there is not a pick, or a mattock, or a spade in motion, but what results for the flow of the heave are recorded in the AMERICAN JOURNAL OF MINING. The shares the capital, the dividends, the losses, and the secretaries, with their addresses, of every Gold, Silver, Lead, and Copper mine throughout the United States and South America, are given in this journal, with prints of mining machinery and scientific inventions having relation to the business of mining. *Oil* it strikes, and *Iron* it hammers at, equally with the same judgment and full detail of important facts and data. The geologist, the mineralogist, the metallurgist, and the man of business will find a subscription to the AMERICAN JOURNAL OF MINING (which is published weekly at New York) an exceedingly advantageous investment.

From the Salt Lake City (Utah) Vidette, Oct. 17.

THE AMERICAN JOURNAL OF MINING.—This is, unquestionably, one of the most handsome and highly instructive journals of mining news that is published in America. No miner, mill man, prospector or public office, away out west here, should be without it. It is published weekly, by Western & Company, 37 Park Row, New York City; George Francis Dawson, editor. The price of this *splendid, illustrated* mining paper is only $4 per annum; six months, $2.25. Send for it, everybody who wants to have a mining monitor of comprehensive character and instructive interest. By the number before us, we see that it has just entered on its second volume.

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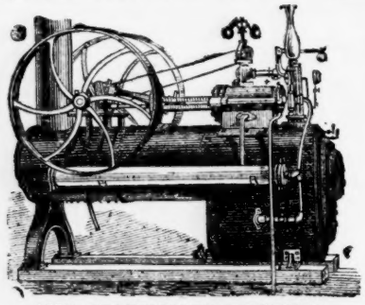
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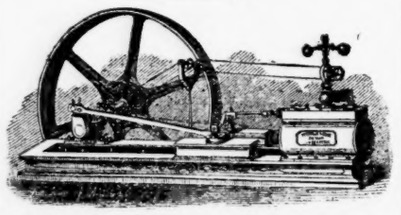
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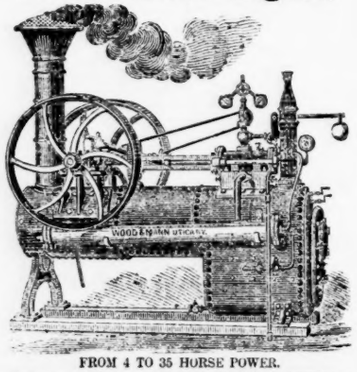

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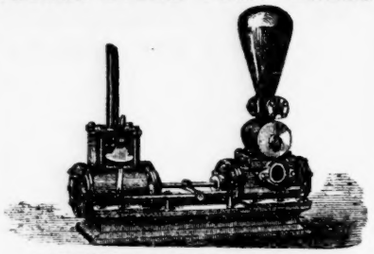

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